



# BIKEWAYS MASTER PLAN UPDATE

A Bicycle Transportation Plan for the  
City of Morgan Hill

*May 2008*

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*Landscape Architecture*

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# ACKNOWLEDGEMENTS

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# TABLE OF CONTENTS

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Chapter 1	Introduction	1
Chapter 2	Recommended Bikeway Network	15
Chapter 3	Bicycle Parking	29
Chapter 4	Design & Maintenance	45
Chapter 5	Implementation	47
Chapter 6	Bicycle Safety & Promotion Programs	53

## APPENDICES

Appendix 1	Cost Data
Appendix 2	Morgan Hill Bicycle Projects in the VTA Bicycle Expenditure Program (BEP)
Appendix 3	Bicycle Transportation Plan: Required Elements of Bicycle Master Plans

# 1. INTRODUCTION

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The City of Morgan Hill provides an ideal environment for cycling. Located in southern Santa Clara County, the City is located on relatively flat terrain and enjoys a temperate climate with summer and winter temperature extremes moderated by its proximity to the coast. As a relatively small city, with a 2007 population of 36,000, any area of the city is accessible by bicycle.

Morgan Hill is also blessed with scenic surroundings, including many rural roads frequented by recreational cyclists that lead to the adjacent hills and agricultural lands.

While Morgan Hill provides great cycling potential, the existing bikeways system does not address all of the City's bicycling needs. The City's first Bikeways Master Plan, approved in 2001, identified the following issues:

- Many key roads are not bicycle friendly (lack of bicycle lanes, wide striped shoulders or wide outside lanes) leading to gaps in connectivity.
- Irregular City limits result in many desirable routes that are outside of the City's jurisdiction. Narrow County rural roads with unpaved shoulders contribute to connectivity gaps.
- Many intersections and railroad crossings are not built to current safety standards and some roads have obstructions to safe bicycle travel.
- While bicycle paths along creeks and drainage ways have been envisioned, many have not been completed.
- Connections to regional trails, such as the Coyote Creek trail, are not clearly established.
- Bicycle parking facilities are inadequate in some locations.

While some of these conditions still exist, much has been accomplished since the original Bikeways Master Plan was approved in 2001:

- Class II bicycle lanes were added along sections of the following roads, closing some of the key road connectivity gaps: Monterey Road, Watsonville Road, Butterfield Blvd, Sutter Blvd, Cochrane Rd, E. Main Avenue and Tennant Avenue. The new segments between Monterey Rd and Sobrato High School contribute to safer routes to schools.
- Class I shared use paths were constructed along Butterfield Linear Park between Central and San Pedro, and West Little Llagas Creek between Edes Court and Edmundson Avenue and further south to La Crosse Circle. An Edmundson Avenue crossing with median refuge provides a trail connection across Edmundson.
- Bicycle parking racks were installed at new municipal facilities.
- A number of bike racks have been installed in the Downtown area along Monterey Road.
- The City has established design guidelines and plan-check procedures to assure that proper bicycle procedures are constructed.
- Additional bicycle parking facilities were added at Community Park, Nordstrom Park, Paradise Park, Galvan Park and Diana Park.
- A City bicycle map has been published and is available at various locations throughout town.
- The MHUSD is actively partnering with the police department providing bicycle safety programs/rodeos to school aged children. Concept Cyclery, a bicycle shop, has expressed interest in partnering with the City for adult and child bicycle safety, bicycle maintenance and repair classes.
- The City has implemented a development review system that allows City staff to evaluate development applications and their consistency with the Bikeways Master Plan.

- The Bikeways Goals and Policies were incorporated into the 2001 General Plan Update.

Recognizing the City's accomplishments since the first Bikeways Plan was approved in 2001, and desiring to continue to realize the community's full potential for cycling, the City, in cooperation with its Bicycle and Trails Advisory Committee (BTAC), engaged in preparation of an Updated Bikeways Master Plan in 2006.

## Goals

Goals of the 2001 Bikeways Master Plan included the following:

- Inventory and evaluate existing cycling conditions.
- Assess potential bicycle connections to residential areas, commercial and employment centers, community facilities, schools, parks, and regional trails.
- Evaluate the potential to expand pathways along creeks and drainage ways.
- Suggest improvements to existing and proposed routes to enhance bicycle safety, such as intersection improvements and railroad crossings.
- Evaluate existing and potential bicycle parking facilities.
- Evaluate existing and potential bicycle safety and promotion programs for both private and public Morgan Hill schools.
- Establish an estimate of capital costs to implement the Bikeways Master Plan over time.

The Bikeways Master Plan is being updated, retaining the goals of the original plan, and to reflect current conditions in Morgan Hill and completed bikeways projects. It is also coordinated with the Draft Trails and Natural Resources Study and the Santa Clara Countywide Bicycle Plan.

## Benefits

An up-to-date Bikeways Master Plan allows the City to be more “proactive” and systematic in achieving a more safe and efficient cycling environment.

- *Safety, Commuting and Recreation* The Bikeways Master Plan encourages bicycle safety and use of bicycles for commuting and recreational purposes.

- *Competitive Grant Funding* With a current Bikeways Master Plan, the City is more competitive in applying for grant funding to implement the plan.
- *Incremental Improvements* It is not possible or even desirable to implement all the proposed capital improvements at once. The Bikeways Master Plan serves as a blueprint to ensure that phased improvements are consistent with an overall plan.
- *Coordination with Development* Some improvements in the Bikeways Master Plan can be implemented over time and linked to development conditions as development occurs.
- *Coordination with Roadway Improvements* Many of the proposed improvements in the Bikeways Master Plan can be implemented concurrently with proposed roadway improvements, resulting in minimal or no additional costs to the City.
- *Multi-Agency Coordination* The Bikeways Master Plan encourages coordination between many City departments (such as police, planning, recreation and public works), Santa Clara County, Valley Transportation Authority, Morgan Hill Unified School District, Santa Clara Valley Water District, and other agencies and organizations, to promote a safe cycling environment.

## Process

The original Bikeways Master Plan was developed through a public process with the active participation of the Bicycle Advisory Committee (BAC). The Master Plan Update included review and compilation by City staff and the consultant of completed bikeways projects since the 2001 Master Plan, a review of whether future routes were still relevant based on current and anticipated development patterns, and coordination of the bikeways plan with the Draft Trails and Natural Resources plan. This information was reviewed in in 2007 with City staff and the Bicycle and Trails Advisory Committee (BTAC). The BTAC also reviewed previous priorities for implementation, and adjusted them to reflect current conditions. The final update will be reviewed by the Parks and Recreation

Commission (PRC), and City Council. Meetings of the BTAC, PRC and City Council are open to the public.

## **Land Uses**

Existing land uses include several commercial areas located on major transportation corridors. These include shopping centers on Dunne, Cochrane and Tennant/Edmundson West of Highway 101; the downtown core on Monterey Road and additional commercial development north and south of the downtown on Monterey. City parks are located throughout the City and County parks are located to the northwest (Coyote Park chain) and southwest (proposed Silveira Park and Coyote Lake - Harvey Bear Ranch). The Coyote Creek trail to the northeast is a significant regional recreational and bicycle commuter link to San Jose. Residential development and schools occur throughout the city, with significant new residential development occurring to the northeast. Other land uses relevant to the Bikeways Master Plan include the hotel/motel developments along Condit Road, as well as the Outdoor Sports Center and Aquatics Center, also on Condit Road, the Centennial Recreation Center on Edmundson Avenue, the Community and Cultural Center on Monterey Road and the Civic Center/City Hall and Public Library on Peak and Main Avenues, as well as the increased residential density and infrastructure development in the Downtown.

The following pages contain maps and lists that are relevant to the Bikeways Master Plan. These include: the City's General Plan Land Use Map; the City's General Plan Circulation Map; a list of Parks and Recreation Facilities, a City-wide map of Parks and Facilities and a map of current MHUSD school boundaries.



## **LIST OF PARKS AND FACILITIES**

### **Community Parks**

Community Park (225 W. Edmundson Ave.)  
Galvan Park (Crest Ave.)

### **Neighborhood Parks**

Diana Park (Diana Ave.)  
Oak Creek Park (Prancer Court)

### **Neighborhood/School Parks**

Nordstrom Park (Murphy Ave.)  
Paradise Park (Lacrosse Dr.)

### **Mini Parks**

Belle Estates Park (Calle Caballeria)  
Conte Gardens Park (Conte Way)  
Diana Estates Park (Diana Ave.)  
Fox Hollow Park (Fox Hollow Circle)  
Hamilton Square Park (Via Corfinio)  
Howard Wiechert Park (Via Del Castille)  
Jackson Park (Trail Dr.)  
Mill Creek Park (La Arboleda Way)  
Murphy Springs Park (Murphy Springs Ct.)  
Sanchez Park (Sanchez Dr.)  
Stone Creek Park (Rosemary Circle)  
21 Mile Park (Edmundson & Monterey Rd.)

### **Community Facilities**

Acton House (Monterey Road adjacent to Morgan Hill House)  
Aquatics Center (Condit Road)  
Centennial Recreation Center (Edmundson Avenue)  
Civic Center/City Hall (Peak Avenue)  
Community and Cultural Center (Monterey Road)  
Friendly Inn (Crest Ave.)  
Morgan Hill House (Monterey Street)  
Public Library (West Main Ave.)  
Police Station (Vineyard Boulevard)  
Interim Skate/BMX Park (Butterfield Boulevard)  
Public Works Department/Corporation Yard (Edes Court)  
Outdoor Sports Center (Condit Road)

## **LIST OF PARKS AND FACILITIES (continued)**

### **MHUSD Schools**

Ann Sobrato High School (401 Burnett Avenue)  
Barrett Elementary School (895 Barrett Avenue)  
Britton Middle School (80 W. Central Ave.)  
Burnett Elementary (85 Tilton Ave.)  
Central Continuation High/Community Adult School (17960/17940 Monterey Street)  
El Toro Elementary (455 E. Main)  
Gavilan College (15750 Vineyard Blvd.)  
Jackson Elementary (2700 Fountain Oaks Dr.)  
Live Oak High School (1505 E. Main Ave.)  
Nordstrom Elementary (1425 E. Dunne Ave.)  
Paradise Valley/Macado Elementary (1400 La Crosse Dr.)  
Walsh Elementary (353 W. Main Ave.)

### **Other Schools**

Carden Academy (410 Llagas Road)  
Gavilan College Morgan Hill Campus (17060 Monterey St)  
Oakwood Country School (105 John Wilson Way)  
Saint Catherine's School (17500 Peak Ave.)  
Shadow Mountain Baptist School (280 Llagas Road)  
Crossroads Christian School (145 Wright Ave.)

## **Coordination With Other Plans**

The original Bikeways Master Plan was prepared in coordination with the City's General Plan Update and for consistency with the County of Santa Clara Trails Master Plan (1995), the Santa Clara County Bicycle Plan (1994), the Santa Clara Countywide Bicycle Plan (2000), the Caltrans Highway Design Manual, and the Valley Transportation Authority's (VTA) Bicycle Technical Guidelines (1999). This update to the Bikeways Master Plan has been coordinated with the City's Draft Trails and Natural Resources Study (2007). The VTA is updating its Bicycle Technical Guidelines. While a draft was available for review, these guidelines were not finalized at the time of preparation of this update. The City should reference the final VTA Bicycle Technical Guidelines once available when reviewing and updating its local bicycle design standards and details.

## **Increased Bicycle Use**

One objective of the Bikeways Master Plan is to comply with the state-wide goal of reducing air pollution by increasing use of bicycles for commuting, thereby reducing automobile use and emissions. 2000 Census data indicates that in Morgan Hill 94 people, or .55% of those working, used a bicycle to get to and from work. With the improvements recommended in the Bikeways Plan, this could be expected to increase to 2% or approximately 500 people based on General Plan population projections. 2% has been chosen as an achievable goal based on the averages of similarly urbanized counties: San Luis Obispo, Santa Barbara and Santa Cruz Counties.

In addition to increasing ridership of work commuters over the age of 16, an additional goal is to increase cycling to school. Children in grades 3 and above are capable of riding a bike or walking to school. According to the California Department of Transportation (Cal Trans):

"Thirty years ago, 60% of children living within a 2-mile radius of a school walked or bicycled to school. Today, that number has dropped to less than 15%. Roughly 25% commute by school bus, and well over half are driven to/from school in vehicles. And back then, 5% of children between the ages of 6 and 11 were considered to be overweight or obese. Today, that number has climbed to 20%. These statistics point to a rise in preventable childhood diseases,

worsening air quality and congestion around schools, and missed opportunities for children to grow into self reliant, independent adults.

Safe Routes to School Programs are intended to reverse these trends by funding projects that improve safety and efforts that promote walking and bicycling within a collaborative community framework."

(<http://www.dot.ca.gov/hq/LocalPrograms/saferoutes/saferoutes.htm>)

Encouraging more children in grades 3-6 living within one mile of schools and children in grades 7-12 living within 2 miles of schools to safely walk or bicycle to school, through promotion, safety awareness, and through improving bicycle connectivity to schools as a high community priority, would address many of the issues noted above. Even a modest goal of increasing ridership to public schools by 5-10 percent would yield approximately an additional 500 - 1,000 riders for a total of 1,000 - 1,500 commute/school related trips by 2020.

## 2. RECOMMENDED BIKEWAY NETWORK

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The Bikeways Master Plan maps of existing and proposed bikeways were developed to meet both commuting and recreational needs throughout the City, and takes into account a wide range of cyclists.

### **Types of Cyclists**

Cycling needs can vary greatly depending on the age, experience and purpose of the cyclist. With this in mind, a variety of bicycle facilities are needed to meet the varying needs of users. For example, a bicycle lane on a busy street such as Monterey would satisfy an experienced bicycle commuter who wants the most direct route to and from work, and is comfortable riding on streets with high speeds and traffic volumes. This same route would be dangerous for an inexperienced cyclist who is just learning to ride. Similarly, a bicycle/pedestrian trail, such as the Wildlife Trail, is appropriate for recreational riders with varying levels of experience, or as a connection for families to the Centennial Recreation Center and Community Park, but may not be the preferred route for a commute cyclist who wants to ride as quickly as possible, and does not want to slow down for pedestrians. Serious recreational riders may prefer routes with steep grades for cardiovascular training, while these same routes would be inappropriate for inexperienced cyclists.

The Morgan Hill Bikeways Plan has been designed to accommodate this diversity of cycling age, experience and purpose.

### **Bikeway Classifications**

Bikeway Classifications in the plan are consistent with the Caltrans Highway Design Manual (HDM) and the VTA Bicycle Technical Guidelines. Quotations noted below are from the HDM, chapter 1000.

#### **Class I: Bike Path**

Bike paths are “completely separated” from the automobile roadway “with cross flows by motorists minimized.”

## **Class II: Bike Lanes**

Bike lanes are striped for “preferential use by bicycles within the paved area” of streets or highways. “Bike lane stripes are intended to promote an orderly flow of traffic, by establishing specific lines of demarcation between areas reserved for bicycles and lanes to be occupied by motor vehicles. This effect is supported by bike lane signs and permanent markings.”

## **Class III: Bike Routes**

“Class III facilities are shared... with motor vehicles on the street. Class III facilities are established by placing Bike Route signs along roadways.”

## **Class III B: Bike Routes with Shoulders**

In addition to these classifications from the Highway Design Manual, the Morgan Hill Bikeways Plan includes a Class IIIB designation for Bike Routes with paved and striped shoulders. In essence, a Class IIIB route functions similarly to a Class II Bike Lane, but is preferable in rural conditions where additional signage and bike lane designations are not desirable or necessary. The Class IIIB designation is included in the VTA Bicycle Technical Guidelines.

## **Bikeways Maps**

The following Bikeways Maps identify existing and proposed future bike paths, lanes, and routes. This proposed bikeway network improves connectivity throughout the City and to regional bikeways. It addresses the needs of both experienced commute cyclists and novice recreational cyclists.

The Bikeways Maps are *planning* maps. Many of the bikeways are proposed only and bicycle improvements are not yet in place. Many of the improvements will be implemented concurrently with the City road improvement / widening projects. The Bikeways Maps are divided into sectors for clarity.

## **Private Roads**

A few of the roads in the bikeways planning map are private roads. These roads would only be designated as part of the bikeways system if there were an agreement between the City and the Homeowners Association for such a designation. Such an agreement would need to take into account liability, responsibility for striping and signage, and long-term maintenance. Private roads are indicated on the highlighted routes.

## Costs

Average costs for the proposed improvements on the bikeways maps are included in the Cost Data Spreadsheet in Appendix 1.

Total costs to implement all the improvements shown are estimated at \$13,875,773 (2007 dollars). Some assumptions were used to determine these costs:

- Infrastructure improvements that may be required as a part of widening (such as realignment of lights, drainage facilities, etc.), are not included.
- The Bikeways Plan includes a total of five bridges: three creek-crossing bridges, and two bicycle/pedestrian bridges across Highway 101 (at Diana Avenue and Barrett Avenue). Both of the highway-crossing bridges would create a low automobile volume "bicycle boulevard." Costs for the bridges are high (\$2,000,000 each). It is assumed the bridges would only be implemented if non-City funding sources, such as a State or Federal grants, became available.
- It is also assumed that bikeways costs for new roads and widening of existing roads will be incorporated into the overall roadway project at the time of implementation. While the bikeways costs for these projects have been itemized, funding will most likely be part of the larger overall roadway project.

## Priority Projects

The improvements shown on the Bikeways Map will be implemented over time. To assist in establishing appropriate phasing packages, the overall Bikeways Map has been divided into segments.

The BTAC has identified the following priorities for implementation. These priorities were selected as the highest need to improve safety, and enhance both commute and recreational cycling.

<b>Priority</b>	<b>Sector Map</b>	<b>Bikeway Segment</b>
<i>Live Oak High School Access</i>	2	24, 33, 38, 52, 53
<i>Sobrato High School Access</i>	1	18 (this segment is also a priority for the east/west connection to Coyote Creek)
	2	23
<i>West Little Llagas Creek Trail</i>	1	20
	4	88, 88A, 90, 91, 91A
	6	120
<i>Santa Teresa Corridor</i>	1	1, 2, 3, 4, 5, 6, 81
	4	82, 84, 84A, 93, 96
	6	124, 126, 129
<i>Monterey Highway Corridor</i>	1	21, 22
	6	122, 123
<i>Madrone Channel Trail</i>	2	19, 140, 141
	3	142
	5	143, 144
	7	145
<i>East/West Connection to Coyote Creek</i>	1	14, 15, 16, 17, 18* (*this segment is also a priority for the Sobrato High School Access)
	2	23, 25, 30, 41, 42, 43, 44, 45, 46, 47, 48, 49



### 3. BIKE PARKING

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Bicycle parking facilities are an important part of the bikeways system, as cyclists need a safe place to park their bicycle when reaching their destination. Different types of facilities are recommended depending on the length of time the bicycle will be parked.

#### **Bicycle Parking Classifications**

There are three classes of bicycle parking facilities as noted in the VTA Bicycle Technical Guidelines (1999):

##### **Class I**

“A method of bicycle parking that protects the entire bicycle and its components from theft, vandalism or inclement weather. Class I bicycle parking is appropriate for long-term (two hours to all day) bicycle parking such as at employment sites, schools and transit stations/stops. It is also important at sites where bicycles are left overnight for several days such as airports and Train stations and of course multi family residential units. Examples of class I bike parking include bicycle lockers, rooms with key access for regular bicycle commuters, guarded parking areas, and valet or check-in parking. A common variation of guarded parking is at high schools and elementary schools where racks are placed within a fenced compound to provide more security. The compound is either locked during the day or unofficially guarded by the activity within the school.

##### **Class II**

“A bicycle rack to which the frame and at least one wheel can be secured with a user-provided U-lock or padlock and cable. Bike racks that provide two points of contact prevent bikes from pivoting and falling over, appropriate for short-term parking where the typical parking duration is less than two hours. They can be thought of as serving the customer or visitor, and satisfy parking demand for locations such as retail stores, libraries, dental and medical offices buildings and at apartments/condominiums.


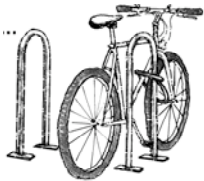

##### **Class III**

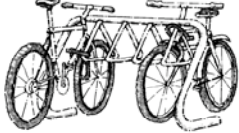


“A bicycle rack designed such that only one wheel and not the frame can be locked to the rack. While still used in such situations like school yards, they are not secure. They are never recommended except in guarded areas or locked rooms where they are used in Class I situations.”

The following pages illustrate acceptable (Class II) and unacceptable (Class III) types of bicycle racks. Class III racks are not suitable for new installations, and should be retained only at K-12 schools and then preferably inside fenced areas that can be locked and/or guarded between arrival and dismissal hours. Class III racks might also be suitable as part of a Class I fenced/guarded installation at some work places, such as the City Corporation Yard.


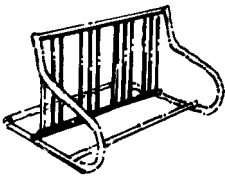


## Morgan Hill Bikeways Plan: Rack Types

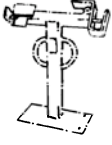
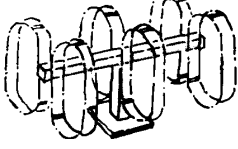
**Acceptable Types: Require at new sites, and use to replace unacceptable types.**

Name	Shape	Remarks
<b>“Wave” *</b>  <i>also known as “Ribbon” rack</i>		<p>SUPPORT: Supports bike’s frame acceptably, but does not prevent front-wheel “flop-over”. Not recommended for new installations.</p> <p>SECURITY: Enables U-locking of frame and wheel.</p> <p>CAPACITY: 1 bike per upright in 2-sided sites. 1 bike per 2 uprights in 1-sided sites unless very wide spacing is specified.</p>
<b>Single Inverted-U</b>  <b>2 units shown</b>		<p>SUPPORT: Supports bike’s frame acceptably, but does not prevent front-wheel “flop-over”. Ideal rack for downtown sidewalk edge by car parking (orient plane of “U” parallel to curb in such sites).</p> <p>SECURITY: Enables U-locking of frame and wheel.</p> <p>CAPACITY: 2 bikes per “U” with ease, 4 if cyclists know how.</p>
<b>Multiple Inverted-U</b>		<p>SUPPORT: Supports bike’s frame acceptably, prevents front-wheel “flop-over” once bike is locked.</p> <p>SECURITY: Enables U-locking of frame and wheel.</p> <p>CAPACITY: 2 bikes per “U” in 2-sided sites, 1 to 1.5 bikes per “U” in 1-sided sites due to difficulty of backing in every 2<sup>nd</sup> bike. Avoid versions with narrow spacings - 36” U-to-U recommended.</p>

Name	Shape	Remarks
<b>"Coat Hanger"</b>		<p>SUPPORT: Bikes lean against triangles suspended from top bar. Additional 2 bikes can lean against ends. Front wheels cannot flop over once bike is locked.</p> <p>SECURITY: U-lock through rack triangle, bike frame, and wheel.</p> <p>CAPACITY: 1 bike per triangle in 2-sided sites. 1 per 2 triangles in 1-sided sites. Add 2 bikes (for ends) in both cases.</p>
<b>Creative Pipe Lightning Bolt™</b>  <b>2-bike 1-sided perpendicular unit shown</b>		<p>SUPPORT: 3-point (down tube against post, plus 2 points on wheel well). Enables use of both hands to lock bike and remove cargo without risk of bike toppling. Front baskets clear tops of posts.</p> <p>SECURITY: Loop on post enables U-locking of frame and front or back wheel. Posts slant back to accommodate all frame sizes.</p> <p>CAPACITY: 1 bike per post.</p> <p>OTHER: Available in 1-sided, 2-sided, and 1-sided-diagonal models for 2 to 8 bikes, all using same post-and-wheel-well module. Stanford University's standard rack.</p>
<b>Columbia Cascade Bollard CycLoops</b>		<p>SUPPORT: Bikes lean against bollards. A second bike can fit from the other side</p> <p>SECURITY: Loop on post enables U-locking of frame and front or back wheel.</p> <p>CAPACITY: 2 bikes per post.</p> <p>OTHER: Available in 1-sided, 2-sided, and 1-sided-diagonal models for 2 to 8 bikes, all using same post-and-wheel-well module. Stanford University's standard rack.</p>

**Unacceptable Types: Recommend replacement at all sites unless noted below.**

Name	Shape	Remarks
<p><b>“Arc” *</b></p> <p><i>Single position shown</i></p>		<p>SUPPORT: One wheel, poorly. Bike can easily be pushed over by vandals. Suitable only as a display stand inside a bike shop.</p> <p>LOCKING: Cannot lock frame.</p> <p>CAPACITY: 1 bike per wheel holder.</p>
<p><b>“Comb” *</b></p> <p><i>also known as “Dishrack”, “Ladder”, “Wheelbender”</i></p> <p><i>One of many variations shown</i></p>		<p>SUPPORT: Supports only wheel except at ends. Bikes easily pushed over, “pretzeling” wheel, hence “wheelbender” name.</p> <p>SECURITY: Must lift bike over rack to lock frame, or else may lock only the wheel (rest of bike can be stolen), except at ends.</p> <p>CAPACITY: 1 bike per foot in 2-sided sites, 1 per 2 feet if 1-sided. Users often lock sideways against the “comb”, blocking others.</p> <p>RECOMMENDATION: Retain at schools especially if in fenced and locked compound or in direct view of office staff.</p>
<p><b>“PW Loop-1” *</b></p> <p><b>“PW Loop-2” *</b></p>		<p>SUPPORT: Supports bike acceptably by one wheel.</p> <p>SECURITY: Enables U-locking of frame <i>but only if “stirrup” faces frame</i>. 1-sided often set up backwards, defeating this. Rod easily cut. Wheel holders removable if nuts not immobilized.</p> <p>CAPACITY: 1 bike per wheel holder</p> <p>RECOMMENDATION: Retain at schools especially if in fenced and locked compound or in direct view of office staff.</p>
<p><b>“Rack III”</b></p> <p><i>2-bike unit shown</i></p>		<p>SUPPORT: Supports bike frame and captures wheels between T-bars (1 fixed, 1 movable), but many “mountain bikes” do not fit.</p> <p>SECURITY: Captures frame and both wheels. Protects padlock, but most cyclists now use U-locks. Large U-locks fit around both T-bars, but few know this. Hence not secure for typical user.</p> <p>CAPACITY: 1 bike per pair of T-bars</p>

Name	Shape	Remarks
<b>“Rally-2” *</b>  <b>2-bike unit shown</b>		<p>SUPPORT: Bracket is intended to support the bike's down tube, but many mountain bikes are too large to fit. Scratches paint.</p> <p>SECURITY: Cannot U-lock bike frame.</p> <p>CAPACITY: 1 bike per down-tube bracket (usually seen in pairs)</p>
<b>“Side Loop-1”*,</b> <b>“Side Loop-2”</b>  <b>2-sided shown;</b> <b>1-sided available</b>		<p>SUPPORT: Supports only the end of one wheel.</p> <p>SECURITY: Cannot U-lock bike frame. Steel rod easily cut by hacksaw or bolt cutters.</p> <p>CAPACITY: 1 bike per wheel holder.</p>

**NOTE: Types whose name is followed by “\*” were encountered during the inventory**

## **Inventory of Existing Bicycle Parking Facilities**

The following inventory indicates the location and quality of existing bicycle parking facilities at primary public, commercial and work place locations. The following conclusions can be drawn from the inventory:

### **Schools**

All schools provide bicycle parking, but only to accommodate a low ridership percentage of total enrollment. The location of racks at some schools does not provide adequate security.

### **Commercial**

While a number of older commercial areas provide bicycle racks, nearly all are a Class III (unacceptable) type, or are improperly installed.

### **Civic Buildings**

While bike racks are provided at most civic buildings, secure (Class I) facilities for employees are not provided. The bike racks at older facilities are Class III instead of Class II, while recently completed facilities feature Class II racks.

### **Parks**

Most neighborhood and community parks have been upgraded to provide adequate bicycle parking facilities.

### **Transit Centers**

The Caltrain station appears to have adequate Class I parking, but the Downtown Transit Center has no Class I or II parking.

### **Workplaces**

Some work places do provide bicycle parking. Specialized allows bicycle parking inside the building, which is usually the least expensive way for an employer to provide Class I (secure) parking.

### **Showers & Changing Facilities**

While these were not inventoried, one can assume that showers and changing facilities are provided at some work places and the high schools.

## Bicycle Parking and Storage Inventory

		Bike Racks		2007-08 Enrollment			
Site & Map Reference Number		Capacity	Type	Students	Rack % <sup>1</sup>	Remarks	Recommendations Summary
	<b>SCHOOL</b>						
1	Burnett ES	15	Comb	546	3%	In fenced area by child development center	Work with MHUSD to increase number of racks where demand dictates, and to reorganize racks where appropriate to increase security and safety with respect to motor vehicle drop-off and pick-up activity. Where possible, racks should be within the courtyard or "interior" created by school buildings. It is good for racks to be either in fenced and lockable compounds, or directly visible to administrative staff, or both. Fenced compounds should be locked or monitored except during AM or PM school commute times.
2	El Toro ES	30	PW Loop-2	566	5%	2-sided access (good)	
3	Jackson ES	5	Comb	498	1%	10' comb installed 1-sided	
4	Machado ES	10	Comb	Day Camp: Varies		School is on Sycamore Avenue, a rural road unsuitable for cycling by most elementary kids.	
5	Nordstrom ES	20	Comb	706	3%	In direct view of office (good)	
6	Paradise Valley ES	30	Comb	523	6%	2 10' combs, 1 blocked on 1 side	
7	Crossroads Christian School	4	Comb	NA		8' comb behind handicap parking - car conflict	
8	St. Catherine		Comb	300		14' comb installed 1-sided	
9	Walsh ES	15	Comb	370	4%	2-sided access (good)	
10	Britton MS	10	Comb	730	1%	20' comb installed against wall	
11	Live Oak HS	54	PW Loop-1, PW Loop-2	1,250	4%	(36) 2-sided, (18) 1-sided. 2 bikes seen 3/10/2000 2:40 pm. Fenced but not locked. Some loops cut.	
51	Central High Continuation	8	PW Loop-1	105	7%		
12	Community Adult School	8	PW Loop1	NA	-	Suggest moving to courtyard for visibility	
32	Gavilan College, Vineyard site	0		NA			
40	Sobrato High School	30	Inv U	0	2%		
	Barrett ES	12	Wave	546	2%		
	Carden Academy	0		120	-		
	Shadow Mountain Baptist School	0		118	-		
	San Martin/Gwinn ES	0		533			
	Oakwood Country School	0					

<sup>1</sup> Rack % indicates percent of total school enrollment that can be accommodated by existing bicycle parking, Enrollment figures shown for MHUSD schools only.

		Bike Racks					
Site & Map Reference Number		Capacity	Type			Remarks	Recommendations Summary
	<b>COMMERCIAL (selected)</b>						
13	Condit/Dunne (3 corners)						Require Class II racks for all new development. Encourage retrofit of Class III to Class II racks where feasible.
	McDonald's	6	Wave				
	Jack In The Box, Taco Bell, Subway, Pizza Hut, Coffee Express, Carl's Jr. Concept Cyclery	0					
14	Tennant Station @ Tennant & Monterey						
	24 Hour Fitness	4	PW Loop-1			1-sided, but backwards so can't U-lock frame	
	Betsy's Restaurant	0					
	Safeway	0					
	Joann Crafts	0					
	CineLux	0					
	Commonwealth Credit Union	9	Arc				
	Morgan Hill Bowl	0					
	Rosso's Furniture	9	Arc				
	Sizzler	0					
	Mountain Mikes	9	Arc				
15	Cochrane & Sutter						
	Mervyn's	6	PW Loop-1			3 sets of 3	
	McDonald's	6	Comb			At sidewalk, so only 1 bike can lock crosswise	
	Sushi Ichiban	3	Side Loop				
	Old Target (Vacant)						
49	Granery @ Depot St	8	PW Loop				
51	Madrone Village @ Cochrane/Madrone Pkwy						
	Chipotle	0					
	Peets	0					
	Fed Ex	0					
	South Valley Natl. Bank	0					
52	Cochrane/Hwy 101						
	Dennys	0					
	In & Out	0					



		Bike Racks					
Site & Map Reference Number		Capacity	Type		Remarks	Recommendations Summary	
	COMMERCIAL (Selected)						
46	Dunne/Walnut Grove Dr: Coyote Creek Plaza						
	Walgreens	5	Comb				
	Trader Joes	9	Wave				
	Starbucks	0					
41	Target @ Cochrane/ Highway 101	8	Bollard				
	Gateway Center @ Cochrane & Monterey	0					
	Am/Pm	0					
	Starbucks	0					
53	Dunne/Hwy 101						
	Home Depot	0					
	Safeway	7	Comb				
	Longs Drugs	0					
	COMMERCIAL (selected)						
	Businesses along Monterey Road						
16	Sutter Hill Plaza, 15700 Monterey	16	Wave-8		2 racks	Require Class II racks for all new development. Encourage retrofit of Class III to Class II racks where feasible.	
17	Century Office Plaza, 16360 Monterey	3	Comb		South side, in back		
18	US Post Office, 16600 Monterey	7	Concrete pod		Useless for securing a bike		
19	Prudential Real Estate, Monterey @ 1st	6	Comb				
20	Tennant/ Monterey						
	Kragen	0					
	Rite Aid	9	Comb				

		Bike Racks		Lockers				
Site & Map Reference Number		Capacity	Type	# bikes)		Remarks	Recommendations Summary	
	COMMERCIAL (selected)							
	Businesses along Monterey Road (continued)							
21	Dollar Tree DD's Discount Monterey x Dunne	0						
22	Sunshine Bikes Shop, 16825 Monterey Rd	6	Comb					
23	Burger King, Monterey @ Edmunson	8	PW Loop- 1					
24	Vineyard Town Center @ Monterey near Edmundson							
	Nob Hill Foods	2	Rack-III					
	Nob Hill Foods	3	Comb			Unusable without blocking sidewalk		
	McDonald's (Nob Hill center)	9	Comb			7 spaces usable		
	Karma Boutique	4	Wave					
	TRANSIT CENTERS							
25	Caltrain Station @ Butterfield Rd	0		50			Add bike lockers for four bikes at Downtown Transit Center.	
47	Caltrain Station @ Depot Street	7 8	Wave Inv U					
26	Transit Center @ Hale/Main	0		0				
		CIVIC BUILDINGS						
27	Development Services Center	6	Comb	0			Change Class III racks to Class II. Add Class II facility at Police Station and bicycle locker if employees cannot park bicycles inside building. Provide Class I parking (possibly a rack within the fenced corporation yard) at the City's Public Works office. Provide adequate bicycle parking facilities at Saint Louise site for determined use.	
27	City Hall	10	Comb	1				
33	Police Station	0		0				
34	De Paul Health Center	0		0				
42	Community Center	14	Inv U	0				
45	Centennial Recreation Ctr	36	Wave					
48	Library	11	Wave					
		DOWNTOWN						
50	Monterey/Main Street	4	Inv U					

		Bike Racks		Lockers			
Site & Map Reference Number		Capacity	Type	# bikes		Remarks	Recommendations Summary
	DOWNTOWN (continued)						
	Monterey/First Street	8	Inv U				
	Monterey/Second Street	12	Inv U				
	Monterey/Third Street	8	Inv U				
	Monterey/Fourth Street	4	Inv U				
	Monterey/Fifth Street	4	Inv U				
MAJOR PARKS/RECREATION FACILITIES							
28	Community Park	18	Wave Inv U			Currently located against fence by MHUSD bus yard	Class II racks for 25 bikes (minimum 3 racks, distribute throughout park)
35	Diana Park	7	Wave				
36	Nordstrom Park	9	Wave				
37	Oak Creek Park	14	Ribbon				Class II racks for 7 bikes near Excalibur entrance
38	Paradise Park	9	Wave				
39	Galvan Park	14	Wave				Class II racks for 25 bikes (minimum 3 racks, distribute throughout park)
43	Aquatics Center	21	Wave	0			
44	Sports Complex	22	Wave	0			
WORKPLACES (see also "Other Businesses" above)							
29	Anritsu, 490 Jarvis	12	Rally-2	0		Great rack site - under roof overhang in clear view of workers in building.	Encourage Class I facilities at all workplaces based on type and size of facility (see VTA guidelines). Encourage showers and changing facilities where feasible. Showers enable active lunchtime and before/after work fitness and recreation activity.
30	North Coast Co, 18305 Sutter	4	Comb	0		Employee entrance, SW corner of building	
31	Specialized Bicycles	8	PW-Loop			By main entrance, for visitors. 2 spaces blocked	
	Specialized Bicycles			130*		In-office bike parking permitted; est. 130 do so	

**For images and descriptions of each rack type, see the document titled "Morgan Hill Bikeways Master Plan: Rack Types"**

# Recommendations

## Schools

Work with MHUSD to increase number of racks where demand dictates, and to reorganize racks where appropriate to increase security and safety with respect to motor vehicle drop off and pick up activity. Where possible, racks should be within courtyard or “interior” created by school buildings. It is good for racks to be either in fenced and lockable compounds, or directly visible to administrative staff, or both. Fenced compounds should be locked or monitored except during AM or PM school commute times.

## Commercial

Require Class II racks for all new development. Encourage retrofit of Class III to Class II racks where feasible. As recommended in the original Master Plan a number of Class II bicycle racks have been added along Monterey Road in the Downtown area satisfying current demand.

### *Downtown Bike Racks Added Since 2001.*

Monterey/Main Street:	2 racks for 4 bikes
Monterey/First Street:	4 racks for 8 bikes
Monterey/Second Street:	6 racks for 12 bikes
Monterey/Third Street:	4 racks for 8 bikes
Monterey/Fourth Street:	2 racks for 4 bikes
Monterey/Fifth Street:	2 racks for 4 bikes

## Transit Center

The original Master Plan requested that an additional locker for two bikes be added at the Downtown Transit Center. Instead, the existing 2 lockers were removed without replacement leaving the Downtown Transit Center without any lockers. Lockers for 4 bicycles should be installed.

## Civic Buildings

The original Master Plan called for a Class I facility for at least 6-8 bikes at the Library/City Hall complex. Since then, a Class I locker for 2 bikes and Class II racks for 18 bikes have been installed. A recommendation to change Class III racks to Class II remains. Add Class II facility at police station and bicycle locker if employees cannot park bicycles inside building. Provide Class I parking (possibly a rack within the fenced corporation yard) at the City’s Public Works office.

## Parks

The original Master Plan proposed to provide Class II racks at all neighborhood and community parks (smaller pocket parks are usually accessed by walking from immediately adjacent residential neighborhoods and do not require bicycle racks), to require Class II racks for all new Homeowner's Association (HOA) parks and to remove Class III racks from Community Park. The City was to consider using Community Park racks inside the City Corporation Yard as a fenced, gated Class I "secure" facility.

The proposed and installed number of racks are as follows:

Community Park	Requested: 25 bikes (minimum 3 racks, distribute throughout park) Added: 2 racks for 14 bikes
Galvan Park	Requested: 25 bikes (minimum 3 racks, located near ball field/MASCA Center, YMCA/Senior Center, and play areas) Added: 2 racks for 14 bikes
Nordstrom Park	Requested: 7 bikes Added: 1 rack for 9 bikes
Oak Creek Park	Requested: 7 additional near Excalibur entrance Added: none
Paradise Park	Requested: 10 bikes Added: 1 rack for 9 bikes
Diana Park	Requested: 7 bikes Added: 1 rack for 7 bikes

The original Master Plan recommendation to provide Class II bicycle racks at neighborhood mini parks where feasible, such as Howard Weichert Park and Jackson Park, remains unchanged.

## Workplaces

The following recommendations from the original Master Plan remain. Encourage Class I facilities at all workplaces based on type and size of facility (see VTA guidelines). Encourage showers and changing facilities where feasible. Showers enable active lunchtime and before/after work fitness and recreation activity.

In addition to changing facilities, which can often be provided by a restroom, some bike commuters need permanently assignable clothing storage lockers. As a

general rule, more bike commuters need clothes lockers than need showers—a shower becomes a necessity only beyond 5 miles or so, depending on the exertion level of one's commute. Commuter clothing lockers should be 18" deep; any shallower and hangers will not fit. For many employees, a half-height (36" high) locker is sufficient.

The following table from the VTA Guidelines provides further guidance for bicycle parking at many different types of land uses.

### **Bike Rack Placement**

Equally important to selecting an appropriate bike rack is proper installation. Some of the bike racks observed in Morgan Hill are not installed for functional use. The VTA Bicycle Technical Guidelines Bike Rack Details and Bike Rack Placement criteria should be observed.

**Table 10-3**  
**Bicycle Parking Supply Recommendations**

Use	Required Number of Bicycle Spaces <sup>(1)(2)</sup>
<b>Residential (such as apartments, condominiums &amp; townhouses)</b>	
• General, multi-dwelling	1 Class I per 3 units + 1 Class II per 15 units.
• Primarily for students & low-income families, multi-dwelling	1 Class I per 2 units + 1 Class II per 15 units
• Primarily for residents 62 and older, multi-dwelling	1 Class I per 30 units + 1 Class II per 30 units
<b>Schools</b>	
• Elementary, middle & high schools	1 Class I per 30 employees <sup>(3)</sup> + 1 spot per 12 students (50% Class I and 50% Class II)
• Colleges - Student residences	1 Class I per 4.5 beds + 1 Class I per 30 employees
• Academic buildings and other university facilities	1 Class I per 30 employees + 1 spot per 9 student seats (25% Class I and 75% Class II)
<b>Park-and-Ride Lots/Parking Garages</b>	7% of auto parking (75% Class I & 25% Class II)
<b>Transit Centers</b>	2% of daily boardings (75% Class I and 25% Class II)
<b>Cultural/Recreational</b> (includes libraries, theaters, museums, & religious institutions)	Class I per 30 employees + (Class II 1,500 sq. ft. or Class II per 60 seats (whichever is greater)
<b>Parks/Recreational Fields</b>	1 Class I per 30 employees + Class II per 9 users During peak daylight times of peak season
<b>Retail Sales/Shopping Center/Financial Institutions/Supermarkets</b>	1 Class I per 30 employees + Class II per 6,000 sq. ft.
<b>Office Buildings/Offices</b>	1 per 6,000 sq. ft. (75% Class I & 25% Class II)
<b>Hotels/Motels/Bed-&amp;-Breakfasts</b>	1 Class I per 30 rooms + Class I per 30 employees
<b>Hospitals</b>	1 Class I per 30 employees + 1 Class II per 45 beds
<b>Restaurants</b>	1 Class I per 30 employees + 1 Class II per 3,000 sq. ft.
<b>Industrial</b>	1 Class I per 30 employees or 1 Class I per 15,000 sq. ft.
<b>Day Care Facilities</b>	1 Class I per 30 employees + 1 Class II per 75 children
<b>Auto-Oriented Services</b>	1 Class I per 30 employees
<b>Other Uses</b>	Same as most similar use listed
<b>Notes</b> (1) For cities with less than 2% bicycle commuter rate. Cities with different bicycle commute rates should pro-rate these accordingly. (2) The minimum number of required Class II Bicycle parking spaces is 4, except when the code would require 1 or less, in which case 2 bicycle spaces must be provided. (3) Employees = maximum number of employees on duty at any one time. Source: League of American Bicyclists, 1994.	

## 4. DESIGN AND MAINTENANCE

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### **Design**

Design of the bikeways network should be based on an agreed upon set of standards to maximize efficiency, consistency and safety.

The VTA Bicycle Technical Guidelines are an excellent source of design standards for nearly every cycling condition and should be adopted as a standard for Morgan Hill. Caltrans Highway Design Manual Chapter 1000 and the Manual on Uniform Traffic Control Devices (MUTCD) are also good sources for design standards.

In addition to the standards noted above, there are some other design issues that should be addressed:

### **Cul-de-sacs**

Where cul-de-sacs are used, a public trail connection should be provided allowing pedestrian and bicycle access between cul-de-sacs, or from the cul-de-sac to an adjacent public amenity, such as a park or trail, as in the Paradise Park neighborhood. Curb cuts should be provided for wheelchair and bicycle access.

### **Way-Finding System**

A way-finding system should be developed for the City's bikeways network. The way-finding system should include signage along paths, lanes and routes indicating key destination points. The way-finding signs could be incorporated with bike lane and bike route signage that is recommended in the Highway Design Manual. The way-finding system should categorize bikeways by level of difficulty, perhaps through color coding. Routes intended for experienced cyclists only should indicate alternate routes for less experienced cyclists.

### **Bike Map**

As proposed in the original Bikeways Master Plan the City has published a bike map including cycling rules, safety tips and bicycling resources. The map is available at various key locations in the city. It is recommended that the map be updated at regular intervals, but at a minimum with each Bikeways Master Plan update. If the City implements a way-finding system the bike map should be coordinated with the signage system to indicate key destinations and level of difficulty.



## Maintenance

Maintenance is key to a safe and enduring bikeways system. The VTA Bicycle Technical Guidelines establish maintenance standards and recommend frequency of maintenance activities for lanes and routes. The following table has been adapted from the Bicycle Technical Guidelines for local use in Morgan Hill.

### Frequency of Maintenance Activities for Roads and Trails

Maintenance Activity	Recommended Frequency
Respond to hazardous pavement failure reports	Respond to 100% of reports within 8 hours of report
Maintain clean walkways/roadside areas	80% of areas maintained to a “satisfactory” level as defined by a photographic standard
Sweep roadways	100% of roadways every two weeks, with 90% maintained to a “satisfactory” level as defined by a photographic standard
All street traffic markings will be maintained in a safe condition at all times.	As-needed
Repair deteriorated non-traffic control signs	100% within 30 days of report/complaint
Maintain landscaping encroachment onto roadway or that obscures sight distance	100% within 24 hours of report
Sweep during construction	Daily

## Street Sweeping

Currently all streets with curbs in the City are swept every two weeks. Street sweeping should include the full width of the bicycle travel area, and not just the parking lane. Streets with no curb are not swept since the sweeping mechanism requires a curb to operate properly. This means that many of the rural roads with shoulders or wide outside lanes are not swept. Many of these occur outside of the City limits and are maintained by the County.

## City/County Coordination

Since many of the recommended bikeways are outside the City limits, strong coordination is needed between the City and County to respond quickly to hazardous roadway conditions.

### **Hazard Report**

The City's website currently has a means of reporting problems and hazards to the City's Public Works Department through its Citizen Inquiry Feedback Form (<http://www.morgan-hill.ca.gov/html/contact/router.asp>). This existing service could be publicized on bikeways maps and made more readily visible on the website. Cyclists could be encouraged to report hazards to the City through this process.

### **Bicycle Paths**

Bicycle paths also require regular maintenance including pavement repair, striping, adjacent vegetation maintenance, and litter pick-up. Path maintenance should be incorporated into the City's parks maintenance program and budget.

### **Adopt-A-Path**

Similar to statewide "Adopt-A-Highway" programs, the City is in the process of establishing an adopt-a-path program to help fund pathway maintenance. Pathway signage should be designed to recognize contributors to the program.

## 5. IMPLEMENTATION

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Several mechanisms and funding sources are available to implement the Bikeways Master Plan. A combination of many funding sources will be needed as no single source can be expected to fund all of the recommendations in the Master Plan.

### **Bikeways Improvements Incorporated into Larger Roadways Projects**

By far the least expensive way to build the bikeways system is to incorporate bikeways improvements as a part of larger roadway projects, such as roadway extensions or expansions, overlay projects and intersection improvements. Due to economies of scale and equipment already in place, it is easier to incorporate bikeways improvements as a part of the overall roadway design, than try to retrofit a previously completed project.

The proposed bikeways improvements should be regularly reviewed and where feasible, incorporated into regularly scheduled city maintenance cycles, such as for roadway overlays and re-striping.

### **Improvements Concurrent with Development**

Many improvements can be implemented concurrent with development. For example, if a development project requires roadway or intersection improvements, then bikeways improvements should be implemented at the same time. Development applications should be reviewed to ensure that improvements consistent with the Bikeways Master Plan are included in the development package.

### **Development Review Checklist**

The City has incorporated bicycle facilities into its development review checklist for use by City staff to evaluate development applications and their consistency with the Bikeways Master Plan. The development review checklist provides City staff with a consistent and objective evaluation tool.

### **Joint Projects**

Many of the proposed bikeways run outside of the City limits. Some of the proposed pathways are on property owned by the Santa Clara Valley Water District. The City should continue to actively pursue joint projects with both the County and the Water District to maximize limited resources. Other partners might

include the Morgan Hill Unified School District through Safe Routes to School funding.

## **Funding Sources**

Several funding sources are available to implement the Bikeways Master Plan, some of which are described below.

### **General Fund**

Capital improvements and maintenance costs could be funded in part through the City's General Fund, although there are numerous competing interests for use of these funds. As noted earlier, the best way to stretch general fund allocations is to incorporate bikeway improvements into larger roadway improvements and regularly scheduled maintenance cycles.

### **Redevelopment Agency**

Some bikeway improvements may be appropriate for Redevelopment Agency funding, especially if they can be tied to economic development projects, such as improving access to commercial areas. Redevelopment Agency funds cannot be used for maintenance.

### **Development Impact Fees**

Impact fees are charged for numerous infrastructure impacts of development including traffic. These fees should be reviewed to ensure that bikeways improvements are included in the impact fee schedule and that a proportional amount of impact fee revenues are allocated to bikeways projects.

### **Other Public Funding Sources**

Numerous funding sources are available to supplement local funds including the following

#### **Regional Sources**

- Bay Area Air Quality Management District (BAAQMD)
- Valley Transportation Authority
- Metropolitan Transportation Commission
- Santa Clara Valley Water District

#### **State Sources**

- California Bicycle Transportation Account
- Transportation Development Act Local Transportation Funds
- Environmental Enhancement and Mitigation Program

- Habitat Conservation Fund
- Land and Water Conservation Fund
- Safe Routes to School
- Transportation Fund for Clean Air (TFCA)
- California River Parkway

### **Federal Sources**

- Transportation Enhancement Act (TEA 21)<sup>2</sup>
- Congestion Management and Air Quality (CMAQ)

### **Private Funding Sources**

Private foundations are also a source of funding, especially for education and safety related programs. The “Guide to Bicycle Program Funding in California” by the Planning and Conservation League Foundation (April 1995) is a resource to research appropriate foundation funding programs.

### **Adopt-A-Trail Programs**

As noted previously, this type of program may be a means of supporting trail maintenance.

### **Revenue-Producing Operations**

Revenue producing operations may be considered adjacent to proposed bikeways, and might include bicycle rentals, snack and juice bars, or other trail-related businesses. Lease revenues could be used to fund long-term maintenance.

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<sup>2</sup> There are several different TEA 21 programs, some of which are managed by regional transportation agencies.

## 6. BICYCLE SAFETY AND PROMOTION PROGRAMS

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### Introduction

The major focus of Morgan Hill's bicycle transportation plan is *facilities* - improving the safety, convenience, and pleasantness of the city's street network for cyclists of all ages. However, equally important are *education* and *promotion*: ways to improve the knowledge, skills, and attitudes of bicycle operators and the motor vehicle drivers with whom they share the streets.

This section describes bicycling education and promotion options available for children, adults, motorists, and professionals. It begins by describing program types and content, then lists current programs in Morgan Hill, and elsewhere in the Bay Area. A set of Recommendations follows.

In California as in all states, bicyclists are legally drivers. The California Vehicle Code - the basis for driver's tests and traffic law enforcement - gives cyclists the same rights and duties as motor vehicle operators. However, *riding* and *driving* a bicycle are different. Riding involves knowing your capabilities and how your bicycle responds. Driving requires, in addition, knowing where to position your bicycle relative to other traffic through intersections and between them. Bicycle driving follows the same "rules of the road" as motor vehicle driving, with additional considerations due to cyclists' lower speed and acceleration relative to motor vehicles.

Unfortunately, too many U.S. bicyclists do not understand bicycle driving principles, even though adult cyclists can learn them in a single half-day session. To compound the problem, few current-generation U.S. parents are experienced street cyclists - in contrast to many other countries. For this reason public agencies and school districts must take leading roles in designing and implementing bicycle driver education programs. Staff time and resources are limited, so partnerships with community and civic organizations, businesses, bike clubs and employers are valuable and often essential for success.

The payoff is potentially large: many cycling educators believe that children who are taught how to safely and legally operate bicycles will become better motor vehicle drivers.

## **Bicycle Education**

Bicycle education generally falls into two different categories: skills-based, and information. Skills-based programs provide the skills necessary to safely ride a bicycle. Informational programs are intended to increase awareness about cycling for both cyclists and non-cyclists.

### **Skills-based Programs**

Children begin to bicycle by learning bicycle riding skills: balancing, steering, braking, turning, safe starting and stopping. Many kids quickly become competent bicycle riders, but until about third grade (age 9 or 10) they are not ready for independent bicycle driving on the street because they lack the attention span, peripheral vision, and understanding of cause and effect required for operating in traffic. They can, however, learn essential "pre-driving" skills such as checking over each shoulder while steering straight. They can also experience cycling on the street with parents in well-controlled situations.

By third grade most children are ready to learn to drive a bicycle on two-lane residential streets on pre-selected routes to and from school. They should be taught the basic rules of the road in conjunction with hands-on (on-bike) instruction. By the end of fifth grade they are typically ready to learn the skills required for longer trips to middle school, involving distances of two miles or more, four lane streets with moderate traffic, and busier intersections. The middle school transition provides a "teachable moment" to impart this knowledge. By seventh grade, most children can be taught to safely handle most streets and traffic flows.

Programs for school-age children are best handled by schools or day care centers, but are often compromised by the time constraints of existing curriculum and by the unfamiliarity of instructors with sound bicycle driving principles. "Citation alternative" classes provide a way to reach youth cyclists who are not following the rules of the road.

Adult cyclists benefit most from a program designed to impart the responsibilities of bicycle operation, demonstrate how to safely share the road with motor vehicle traffic, and provide tips on the benefits and methods of bicycle commuting. However, programs aimed at adults typically attract only those who are already interested.

<b>Audience</b>	<b>Relevant Bicycling Knowledge and Skills</b>
<b>All Ages</b>	<p>Helmet Promotion</p> <p>Proper helmet fitting and adjustment, plus knowledge that helmets alone do not make a cyclist safe.</p>
<b>Parents and child-care providers of young cyclists</b>	<p>Basic bicycle fit and equipment safety check</p> <p>Ways of teaching a child how to mount, start, balance, brake, stop, turn, and dismount a bicycle - and why training wheels are counterproductive.</p> <p>Knowledge of common child cyclist errors, on and off streets</p> <p>Knowledge of children's' limitations in perception, attention, and ability to understand situations</p>
<b>Child cyclists, Grades K-2</b>	<p><i>Children in this age range are not ready to "drive" a bike but can learn riding and "pre-driving" skills.</i></p> <p>Pedestrian skills: stopping, looking, crossing, waiting, alertness</p> <p>Basic bicycle fit and equipment safety check</p> <p>Basic control and handling (mounting, dismounting, balancing, starting, stopping, turning, braking, crossing or avoiding surface hazards).</p> <p>"Pre-driving": Shoulder checks, driveway "ride-out" hazard, eye contact</p>
<b>Child cyclists, Grades 3-5</b>	<p><i>Opportunity: Start of 3<sup>rd</sup> grade, when most children can be taught to safely bike to elementary school along quiet neighborhood streets.</i></p> <p>Rules of the Road: Riding on the right, yielding, stop signs and signals, shoulder checks, lateral position changes, pedestrian-style and two-step turns at intersections. Visibility, hand signals. School commutes on prearranged routes</p>
<b>Child cyclists, Grades 6-8 (Middle School)</b>	<p><i>Opportunity: Transition between 5<sup>th</sup> and 6<sup>th</sup> grade, when most children are ready to learn skills for middle school commutes using busier streets.</i></p> <p>Intermediate Rules of the Road: Positioning at intersections by destination, crossing right-turning traffic, where to ride on busier streets. Emergency braking and obstacle avoidance.</p> <p>Compliance with Vehicle Code regulations</p>



Audience	Relevant Bicycling Knowledge and Skills
<b>Child cyclists, High school</b>	Compliance with Vehicle Code regulations including equipment Encouragement of the bicycles as a practical transport mode for work and errand-running trips, by itself and combined with transit
<b>Adult cyclists</b>	Compliance with Vehicle Code regulations including equipment Knowledge of real and perceived safety hazards and how to reduce risk Human performance and practical and enjoyable cycling Where and how to ride on various types of streets and lane widths. Local route and bike/transit options

### Informational programs

Motorist-oriented programs generally reach their intended audience at specific points, i.e. during driver's training courses, driver's licensing exams and traffic school courses for violators.

Police Cyclist training prepares law enforcement personnel for on-bike patrol and apprehension of suspects. Its week-long curriculum incorporates bicycle driver education lessons comparable to non-police adult cycling classes, so an officer with such training becomes a valuable resource for teaching bicycle driver education to the public at large.

Lastly, promotions such as radio and television Public Service Announcements, "Bike To Work" and "Bike To School" days, and other events focused on bikes as utility transportation, impart the message that bikes belong on streets, and are an accepted transportation choice in the community.

<b>Audience</b>	<b>Relevant Bicycling Knowledge and Skills, or Messages</b>
<b>Motorists</b>	<p>Recognition of cyclists' right to use the road as drivers</p> <p>Understanding, anticipation and avoidance of common cyclist mistakes</p> <p>Understanding and avoidance of common motorist mistakes</p>
<b>Law Enforcement personnel</b>	<p>Recognition of cyclists' right to use the road as drivers</p> <p>Knowledge of Vehicle Code sections regarding cyclists, including often-misinterpreted provisions such as "as far to the right as practicable", legality of occupying a traffic lane, and vehicular left turns</p> <p>Knowledge of common motorist errors and violations which obstruct and endanger cyclists, especially right-of-way violations</p> <p>Knowledge of non-moving-violation issues related to cyclist safety, such as improper car parking, and obstruction of bike lanes</p>
<b>Community</b>	<p>Promotion of cycling as healthy and clean transportation that can also be safe and enjoyable.</p> <p>Acknowledgement of cycling as a first-class transportation mode, and of cyclists as bona-fide users of the public streets.</p>

## Delivery Formats

### Skills-Based Programs

*Physical education and After-School Events* Although school curriculum is often already planned to fill an entire year of instruction, leaving no time to teach children the skills needed to safely bike to school, this obstacle can be avoided if cycling is incorporated into physical education or other curriculum. There is a good case to be made for teaching street cycling as physical education, because it provides the foundation for a lifetime of fitness-enhancing transportation and recreation. In the past, such programs have often depended on the initiative of a particular teacher who is also a cyclist; this is the case in Berkeley. Children leaving campus for instructional purposes during school hours typically must be supervised by a certified teacher, even if volunteer cycling instructors assist. Liability concerns in some districts may prohibit off-campus travel even for instructional purposes.

*Bike Rodeos* A bicycle rodeo is an outdoor on-bike event that may be offered during school or on a weekend day. Rodeos are usually set up in parking lots and typically include helmet fitting, equipment safety checks, and several on-bike

"skill stations" such as slaloms, spiral courses, and "slowest finisher wins" races. Most of these on-bike activities develop and test handling skills but few involve driving skills; if any driving material is included it may be as a short video (see Videos elsewhere in this section). Rodeos are valuable for young "pre-bicycle-driving" children and also for reaching parents and encouraging helmet use and proper fitting.

*Instructional Equipment Trailers* Some school districts, counties, and states maintain trailers stocked with helmets and fully-maintained children's bicycles, which they transport to bicycle driver education class sites. Arriving with all needed equipment frees parents from the need to have purchased bikes and helmets in advance and ensures that all childrens' bikes are in working order without delaying the start of instruction. Such setups can of course be used for off-street-only or on-street education. Hawaii's "OBEEP" (Oahu Bicycle Education and Encouragement Program) uses such a trailer. The city of Dublin is funding a bike equipment trailer with an Office of Traffic Safety grant. Morgan Hill could team with other South County cities to share a trailer.

*Safe Moves "Safety Town"* Safe Moves, a safety education company based in Southern California with client cities throughout the state, goes beyond the basic bike rodeo with its "Safety Town". This elaborate set of props simulates a street intersection complete with lanes, sidewalks, driveways, signs, signals, and movable "car" shapes. Young children are taught pedestrian skills such as driveway awareness and use of pedestrian signals. Older kids use the "street" and "intersection" to practice stopping, looking, yielding, starting, and proper position for their intended destination.

*Off-School Class Rides* During the 1980's one Palo Alto middle school offered a multi-week 10-15 hour class which included supervised practice rides on neighborhood streets in the school's vicinity. Diana Lewiston, an Effective Cycling instructor (see Effective Cycling below) conducted these classes.

*Recreational Bicycle Club Rides And Organized Classes* Most recreational bicycle clubs have scheduled group rides of several levels of distance and difficulty. Adult and teen cyclists can gain on-street experience, endurance and confidence on these rides, and some clubs even offer "parent and tot" rides. The

San Jose-based Almaden Cycle Touring Club (ACTC) has a full schedule of organized rides through Morgan Hill and the South County area. Note that there is no guarantee that the ride leader or participants understand the principles of safe and legal bicycle driving.

Some bike clubs also offer organized training classes. The Almaden club's ACTC Academy is a multi-week series that brings novice recreational cyclists up to touring-ready. Academy coordinator Esther Snively has completed the Effective Cycling Road I class.

*Youth "Earn A Bike" And Bike Repair Programs* Many organizations around the country have created programs which offer disadvantaged youths the opportunity to "earn a bike" by learning repair skills and using them to fix up donated or abandoned bicycles. These programs help provide kids with an alternative to gang activity and petty crime, and an opportunity to learn useful work skills. They do not typically include bicycle driver education instruction, but are a potential channel for it. Related options include after-school and drop-in bike repair clinics. The Youth Bicycle Education Network (YBEN) is a national resource group for such operations. Some examples of "Earn-a-Bike" programs are East Palo Alto's Major Taylor Cycling Club, Oakland's Cycles Of Change, and an Oakland Parks Department program.

*"Trips For Kids"* Marin County-based Trips For Kids conducts organized rural and mountain rides for inner-city youth of middle school age or above, to broaden their horizons. Rides of this type could provide a teaching opportunity for bicycle driving principles.

## **Informational Programs**

*Classroom Presentations* Although they must practice on a bicycle before becoming competent, children can learn the basic rules of the road in a classroom or assembly environment. In many cities this is the only "cycling education" offered, if any. Because school years are almost entirely preallocated and because few districts have in-house personnel trained as bicycle driving educators, a one-hour presentation once every year or two is all that many children receive. These presentations are often delivered by police officers, some

of which are Police Cyclists (patrol officers trained in bicycle driving and law enforcement techniques).

Some “bike safety” presentations teach only helmet use, which is valuable but not sufficient (helmets can reduce head injuries in a crash, but sound bicycle driver education teaches cyclists how to avoid crashes.)

*Youth “Diversions” Programs* City police departments often offer remedial classes for youths stopped for illegal cycling (typically wrong-way or stop sign/signal violations). These are often taught on a Saturday by police personnel, sometimes by a bicycle-mounted patrol officer.

*Warning Stops* Police officers may stop cyclists who are behaving improperly or whose bicycle lacks required equipment such as lights. If an officer is properly prepared, these stops are opportunities for behavior-targeted education. Violation-specific handouts, ideally available in each language spoken in a jurisdiction, can help to reinforce each message. Bike shops sometimes work with law enforcement to add coupons to these handouts, good for discounts on helmets, lights, locks, and accessories.

*“Good Driving” Stops and Rewards* Some police departments make “good bicycle driving” stops of youths, rewarding proper bicycle driver behavior with coupons for attractions and restaurants. Such programs are usually preannounced to the community and coupled with other educational outreach and promotion.

*Bicycle Route Maps* Bicycle route maps (“bike maps” for short) are one of the items most frequently requested by commuter and recreational cyclists. They reveal routes and shortcuts that cyclists would otherwise have to discover by trial and error or by driving. Many show facility type (e.g. striped bike lane or shoulder, sign-only bike route, or separate mixed-use path) and some also indicate peak traffic volumes. Many maps also include detailed bicycle driver information, typically on the back.

Some cities have gone beyond the traditional folding paper map. San Francisco and San Jose also print their maps in their Pacific Bell telephone books. The bike maps of Belmont, Burlingame, Mountain View, Palo Alto, Sacramento, San Francisco, San Mateo, Pleasanton, San Jose, Sunnyvale and Santa Clara County are available on the Internet; links to these can be found on the Silicon Valley Bicycle Coalition website at <http://www.svbcbikes.org>. This web site features also features County maps, regional paths and routes information and State and County Maps.

Many cities offer free downloadable bike maps over the internet. This approach may also be feasible in Morgan Hill.

### **Comprehensive (Informational Plus Hands-on Programs)**

*The Basics Of Bicycling* The Bicycle Federation of America (BFA) created a curriculum called "The Basics of Bicycling", which includes in-class and on-bike/off-street practice. Many school districts base their programs on this material, which includes a comprehensive instructor guide and lesson plans. Information is available at <http://www.bikefed.org>.

*Effective Cycling™* Effective Cycling™ ("EC") is a standardized bicycle driver education curriculum for adults and children. It was created in the 1970s by John Forester, a cyclist, bicycle racer, transportation engineer, and past president of the League of American Bicyclists (LAB), the U.S. national cycling advocacy organization. Forester's original Effective Cycling class covered all aspects of cycling from bicycle driving skills to handling, maintenance, nutrition and physiology. Knowledge of its bicycle driving material was tested on a multiple-choice written test, a parking-lot maneuvering test, and an on-street road examination. Because of its encyclopedic scope, a full EC class was a 33-hour multi-week production which understandably attracted only the most dedicated instructors and students due to the time commitment. EC in this format probably reached several thousand cyclists; several hundred individuals took the time to not only pass the course but to become Effective Cycling Instructors (ECIs).

*Police Cyclist Training* Bicycle-mounted patrol forces now number in the hundreds across the country; Alameda, Albany, Berkeley, Dublin, Livermore, Menlo Park, Monterey, Palo Alto, San Francisco and San Jose are but a few local cities which have them. Morgan Hill officers have also undergone this

training. Police Cyclist training is offered by two organizations; one is IPMBA, the International Police Mountain Bike Association, a spin-off of the League of American Bicyclists.

## **Promotions**

*Helmet Giveaways & Discounts* Bicycle helmet use is required by California law for children 18 and under. Over the past decade, this law and the popularity of recreational cycling have combined to drive the retail price of helmets from the \$50 range to the mid-\$20s, and standards-compliant helmets are now available at stores such as Wal-Mart in addition to the traditional bike shop. Still, the cost of helmets remains a significant barrier to low-income families who may struggle just to afford bikes for their children. Many public health agencies and police departments offer free or discounted helmets to children and parents, often at bicycle rodeos. Several companies offer fully certified child helmets at bulk costs of as low as \$5.

If agency-provided free helmets are "earned" by attending a bicycle safety presentation, they become an incentive for education.

*National Bike Month/Bike To Work Day/Bike To School Day* May is National Bike Month, during which Americans are encouraged to ride a bike at least once. The third week is typically when cities and other jurisdictions hold Bike To Work Day promotions, often on Tuesday. In recent years this promotion has been expanded to Bike to School Day as well.

California's statewide Bike To Work Day promotion is coordinated by the California Bicycle Coalition (CBC), based in Sacramento ([www.calbike.org](http://www.calbike.org)). Bay Area Bike To Work Week events are coordinated by RIDES For Bay Area Commuters (RIDES, Inc.) based in Oakland ([www.rides.org](http://www.rides.org)).

*Walk Our Children to School Day* The growing movement to restore and improve pedestrian safety and "walkability" in neighborhoods and cities has spawned a worldwide event devoted to encouraging parents to walk with their children to school. This is another opportunity to promote cycling to school, and

October is just after the start of the school year, unlike May's Bike To School Day.

*Street Fairs with Attended Bike Parking* Several bicycle transportation advocacy groups in the Bay Area, including the Silicon Valley Bicycle Coalition, work with city event promoters to offer free guarded bicycle parking at street fairs and athletic events. These groups usually offer informational pamphlets about bicycle driving and safety at their tables.

*"Charity" Rides* Many charity campaigns have organized walking and cycling events to raise funds through mileage-based pledges. These events are as yet untapped as opportunities for street cycling education, but could provide a new channel if pamphlets or other materials were supplied to the organizers.

## Current Programs in Morgan Hill

<b><u>Police Department</u></b> <b>Bicycle Patrol</b> <b>408.779.2101</b>	Helmet law enforcement - children under 18 not wearing a helmet are required to attend a bicycle rodeo or receive a citation.  Bicycle rodeo collaboration between Police Department and MHUSD  Schools and church groups can contact Morgan Hill Police Department for rodeos.
<b>Crime Prevention &amp; Disaster Preparedness</b>	Annual Child Safety Fair  Participate in Santa Clara County's Traffic Safe Communities Network, an information-sharing group that has a bicycle and pedestrian safety subgroup.



## Recommendations

### Education

1. Develop age-specific bicycle safety education for school-age children which includes the following elements:

Grades	Recommendations
<b>K-3</b>	Educate parents about age, readiness levels, and essential skills for child cyclists. <u>Effective Cycling Kids I</u> (Parent class) For Grade 3 and up, incorporate school bicycle commute promotion in parent packet distributed at start of school year. Teach children basic bicycle handling (bike rodeos, parking-lot practice) Pedestrian safety and traffic awareness Helmet promotion and fitting, including proper adjustment Safe Moves, ALTRANS, or other classroom and on-bike programs (No biking to school until Grade 3 or 4)
<b>4-5</b>	Escorted teaching ride on students' school commute route <u>Basics Of Bicycling</u> , <u>Effective Cycling Kids II</u> , or similar course
<b>6-8 (Middle School)</b>	Escorted teaching rides for incoming middle school students prior to school year, to familiarize them with their new commute routes. Evaluate <u>Effective Cycling Kids III</u> curriculum when available.
<b>High school</b>	Organize a school cycling club Classes on touring, racing, maintenance by volunteer bicycle advocates or bike shop staff. Offer <u>Effective Cycling Road I</u> classes

## **Bicycle Helmets & Lighting**

2. Partner with Morgan Hill's bicycle shops and other retailers that sell helmets, to create incentives such as discount coupons for obtaining and using helmets, lights, and locks. Consider a citywide promotion to encourage the use of red blinking taillights.

## **Program Development**

3. Have at least one school district instructor take the Effective Cycling Road I class, and ideally also become an Effective Cycling Instructor.
4. Network with other cities within Santa Clara County and the greater Bay Area that have programs underway, to determine the best curricula and education providers.
5. Establish District standards for bicycle driver education of school age children by age group (see table above).
6. Create Recommended Bicycle Route To School maps for all schools, with input from Public Works and the city Bicycle and Trails Advisory Committee. Update these maps annually as the city's bicycle improvement projects move forward. (See [Sample Bike Route To School Guidelines](#) in the Appendix.)
7. Explore multi-city sharing of bicycle safety training equipment (a trailer with childrens' bicycles, helmets, and other gear needed for classes)

## **Enforcement**

8. Continue citation alternative program and consider expanding its scope  
Continue the Police Department program offers participation in bicycle rodeos as an alternative to citation for helmet-law violations. Consider expanding this to other California Vehicle Code violations including wrong-way riding (with allowances for streets that are not bike-friendly), riding without lights and reflectors at night, and failure to stop at signals or check and yield at stop signs.
9. Equip Police Department with behavior-specific handouts  
The educational value of police contact with youth and adult cyclists can be maximized if traffic and patrol officers have well-written handouts addressing most common bicycle violations (wrong-way, ignoring traffic controls, riding at night without lights). The handouts should address one behavior or set of related behaviors. Handouts should be available in English and Spanish. Handouts can incorporate bike shop discount coupons for lights, helmets, locks, and reflective accessories.

10. Support the reduction of fine structures for bicycle infractions

Roughly half of bicycle/automobile collisions are caused by cyclists not following the rules of the road, i.e. riding on the wrong side of the street or cycling without lights at night (Source: Federal Highway Administration, "Pedestrian and Bicycle Crash Types of the Early 1990's, Publication No. FHWA-RD-95-163, June 1996). Cyclists have the same responsibilities under the law as motorists, and should be cited for safety-related violations. However, police have been reluctant to cite bicycle offenders, especially children, because they believe it will result in negative publicity for their department. In addition, cyclists have until recently been subject to the same fine levels as motorists, though bicycles rarely injure other parties or inflict significant property damage.

In 1994, California law was changed to enable local authorities to reduce fines for bicycle offenses. Yolo County (including the City of Davis) has done so. Morgan Hill and Santa Clara County could develop a bicycle fine structure such that city officers and sheriff deputies will be more willing to impose them.

## **Promotion**

11. Capitalize on existing annual promotions

These include events such as National Bike Month (May), Bike To Work Day, Bike To School Day, and Walk Our Children To School Day. There is also an annual criterium held locally over the Memorial Day weekend.

12. Explore ways to provide bicycle driver education messages aboard VTA buses.

## APPENDICES

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## **Appendix 1: Cost Data**

# Morgan Hill Bikeways Master Plan Update - Cost Data Assumptions

Trail Type	Assumption	Cost	Unit	Cost per Lf/Trail
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## Shared Use Path

8' wide trail: 2" AC over 4" AB		\$140.00	TN	\$13.85
2' wide shoulders each side: 6" AB		\$40.00	TN	\$7.10
2"x4" headerboard on AC edges		\$40.00	TN	\$5.33
Sign with post at all user interface points		\$7.50	LF	\$15.00
Landscaping and irrigation: 10' minimum on each side		\$350.00	EA	\$1.00
Ground Cover: low, in all planting areas		\$1.00	SF	\$20.00
Trees: 2 - 15 Gal. per 100' each side		\$100.00	SF	\$20.00
2" Mulch in all planting areas		\$100.00	EA	\$4.00
Landscape Boulders: 2 per 100'		\$60.00	CY	\$7.42
Benches: 1 per 1000'		\$300.00	EA	\$6.00
Trash receptacles: 1 per 1000'		\$1,500.00	EA	\$1.50
		\$1,200.00	EA	\$1.20
<b>Construction cost per lf:</b>				<b>\$102.40</b>

## Bike Lane Both Sides

Thermoplastic striping, 6" wide		4.00	LF	4.00
Sign with post at major intersections or min 1/1000'		350.00	EA	1.00
Pavement markings, 50 sf at all intersections before & after or min 1/700' on each side of the road		400.00	EA	1.14
Striping design: public works				0.00
<b>Construction cost/total project cost per lf:</b>				<b>6.14</b>

## Bike Lane One Side

Thermoplastic striping, 6" wide		2.00	LF	2.00
Sign with post at major intersections or min 1/1000'		350.00	EA	1.00
Pavement markings, 50 sf at all intersections before & after or min 1/700' on each side of the road		400.00	EA	0.60
Striping design: public works				0.00
<b>Construction cost/Total project cost per lf:</b>				<b>3.60</b>

## Bike Route

No striping				0.00
Sign with post at all intersections or min 1/1000' each side		350	EA	1.00
<b>Construction cost/Total project cost per lf:</b>				<b>1.00</b>

## Bike Route w/Shoulder Striping

Thermoplastic striping, 4" wide		3.00	LF	3.00
Sign with post at all intersections or min 1/1000' each side		350	EA	1.00
<b>Construction cost/Total project cost per lf:</b>				<b>4.00</b>

Morgan Hill Bikeways Master Plan Update - Cost Data  
Sector 1

Bikeways Segment #	Description	Segments with Installation Priority	Trail Type	Lineal Feet	Unit Cost/Lf	Subtotal	Bridge Crossing	Track Crossing	Median Refuge	Total	For Applicable Foot Notes See Last Page
1	Hale Ave.: Willow Springs Rd. to Tilton Ave.		Bike Lane, Both Sides	2036	\$6.20	\$12,623				\$12,623	
2	Hale Ave.: Tilton Ave. to . Madrone Parkway		Bike Lane, Both Sides	3178	\$6.20	\$19,704				\$19,704	
3	Hale Ave.: Madrone Parkway to Liagas Rd.		Bike Lane, Both Sides	3158	\$6.20	\$19,580				\$19,580	
4	Hale Ave.: Liagas Rd. to Wright Ave.		Bike Lane, Both Sides	2657	\$6.20	\$16,473				\$16,473	
5	Hale Ave.: Wright Ave. to W. Main Ave.		Bike Lane, Both Sides	2021	\$6.20	\$12,530				\$12,530	
6	Hale Ave.: W. Main Ave. to W. Dunne Ave.		Bike Lane, Both Sides	1895	\$6.20	\$11,749				\$11,749	
7	Dewitt Ave.: W. Main Ave. to W. Dunne Ave.		Bike Lane, Both Sides	1390	\$6.20	\$8,618				\$8,618	
8	W. Main Ave.: Peak Ave. to Dewitt Ave.		Bike Lane, Both Sides	676	\$6.20	\$4,191				\$4,191	
9	Wright Ave.: Peak Ave. to Monterey Rd.		Bike Lane, Both Sides	2504	\$6.20	\$15,525				\$15,525	
10	Liagas Rd.: Rose Orchard Ct. to Hale Ave.		Bike Lane, Both Sides	4035	\$6.20	\$25,017				\$25,017	
11	Future Rd.: Hale Ave. to Monterey Rd.		Bike Lane, Both Sides	1362	\$6.20	\$8,444				\$8,444	1
12	Liagas Rd.: Hale Ave. to Monterey Rd.		Bike Lane, Both Sides	1307	\$6.20	\$8,103				\$8,103	
13	Monterey Rd.: Madrone Parkway to Future Rd. (Segment 11)										
14	Tilton Rd.: Hale Ave. to Monterey Rd.		Bike Lane, Both Sides	4153	\$6.20	\$25,749				\$25,749	
15	Monterey Rd.: Curry Ave. to Madrone Parkway		Bike Lane, Both Sides	900	\$6.20	\$5,580				\$5,580	2
16	Curry Ave.: Hale Ave. to Monterey Rd.		Bike Lane, Both Sides	1802	\$6.20	\$11,172				\$11,172	
17	Doughtery Ave.: Tilton to Curry Ave.		Bike Route	1219	\$1.00	\$1,219				\$1,219	
18	Tilton: Hale Ave. to Monterey Rd.		Bike Route	1266	\$1.00	\$1,266				\$1,266	
			Bike Lane, Both Sides	2022	\$6.20	\$12,536				\$12,536	
19	Madrone Channel Trail: Burnett to Coyote Creek Trail		Shared-Use Path	2265	\$103.00	\$233,295				\$233,295	
20	Little Liagas Trail: W. Dunne Ave to W. Main Ave.		Shared-Use Path	2451	\$103.00	\$252,453				\$252,453	7
21	Monterey Rd.: W. Main Ave. to W Dunne Ave.		Bike Route	2166	\$1.00	\$2,166				\$2,166	4, 6
22	Monterey Rd.: Tilton to City Boundary		Bike Lane, Both Sides	860	\$6.20	\$5,332				\$5,332	4, 6
80	W Dunne Ave: Monterey Rd to Peak Ave		Bike Lane, Both Sides	2681	\$6.20	\$16,622				\$16,622	
81	W Dunne Ave: Peak Ave to Dewitt Ave		Bike Route	950	\$1.00	\$950				\$950	
Sector 1 Total:						\$730,898	\$0	\$0	\$0	\$730,898	

Morgan Hill Bikeways Master Plan Update - Cost Data  
Sector 2

Bikeways Segment #	Description	Segments with Priority	Trail Type	Lineal Feet	Unit Cost	Subtotal	Bridge Crossing	Track Crossing	Median Refuge	Total	Applicable Foot Notes
23	Burnett Ave.: High School to Coyote Creek Connection		Bike Lane, Both Sides	3023	\$6.20	\$18,743	\$300,000			\$318,743	
24	Half Rd: Condit Rd. to Mission View		Bike Lane, Both Sides	1532	\$6.20	\$9,498				\$9,498	
25	Coyote Creek Connection: Burnett Ave. to Malguerra Ave.		Shared-Use Path	3740	\$145.00	\$542,300				\$542,300	
26	Malguerra Ave.: End of Coyote Creek Connection to Morning Star		Bike Route	1180	\$1.00	\$1,180				\$1,180	
27	Cochrane Rd. Trail: End of Malguerra Ave. Trail to the Intersection of Malguerra Ave. & Cochrane Rd.		Bike Route w/Shoulder Striping	1548	\$4.00	\$6,192				\$6,192	
28	Cochrane Rd. Trail: Intersection of Malguerra Ave. & Cochrane Rd. to Coyote Rd.		Bike Route w/Shoulder Striping	3352	\$4.00	\$13,408				\$13,408	
29	Coyote Rd.: Cochran Rd. to Half Rd.		Bike Route w/Shoulder Striping	2603	\$4.00	\$10,412				\$10,412	
30	Cochrane Rd: Madrone Pkwy to Madrone Channel Trail		Bike Lane, One Sides	1581	\$3.60	\$5,692				\$5,692	
31	Coyote Rd.: Half Rd. to E. Main St.		Bike Route w/Shoulder Striping	2005	\$4.00	\$8,020				\$8,020	
32	Peet Rd.: Half Rd. to E. Main St.		Bike Lane, Both Sides	1959	\$6.20	\$12,146				\$12,146	
33	Elm Rd.: Half Rd. to E. Main St.		Bike Lane, Both Sides	2014	\$6.20	\$12,487				\$12,487	
34	Future Road: Half Rd. to E. Main St.		Bike Lane, Both Sides	1997	\$6.20	\$12,381				\$12,381	1
35	Condit Rd.: Half Rd. to E. Main St.		Bike Lane, Both Sides	2033	\$6.20	\$12,605				\$12,605	
36	Serene Dr.: Sutter Boulevard to E. Main St.		Bike Lane, Both Sides	3858	\$6.20	\$23,920				\$23,920	
37	Serene Dr.: Sutter Boulevard to E. Main St.		Shared-Use Path	3681	\$103.00	\$379,143				\$379,143	
38	Mission View: Cochrane Rd. to Half Rd.		Bike Lane, Both Sides	3321	\$6.20	\$20,590				\$20,590	
39	St. Louise Dr.: Cochrane Rd. to Half Rd.		Bike Lane, Both Sides	3392	\$6.20	\$21,030				\$21,030	
40	Half Rd: Mission View to Peet Rd		Bike Lane, Both Sides	2621	\$6.20	\$16,250				\$16,250	
41	Future Road: Vista de Lomas Ave to Cochrane Rd. Vista De Lomas Ave.: Burnett Ave. to End of Existing		Bike Lane, Both Sides	2852	\$6.20	\$17,682				\$17,682	1
42	Street of Vista De Lomas Ave.		Bike Route	2136	\$1.00	\$2,136				\$2,136	
43	Freeway Vista: Burnett Ave. to Peebles Ave.		Bike Route	1828	\$1.00	\$1,828				\$1,828	
44	Peebles Ave.: Clayton Ave. to Freeway Vista		Bike Route	3248	\$1.00	\$3,248				\$3,248	
45	Clayton Ave.: Peebles Ave. to Madrone Parkway		Bike Route	1047	\$1.00	\$1,047				\$1,047	
46	Madrone Parkway: Monterey Rd. to Butterfield Blvd.		Bike Lane, Both Sides	1628	\$6.20	\$10,094				\$10,094	
47	Butterfield Blvd.: Madrone Parkway to Cochrane Rd.		Bike Lane, Both Sides	1639	\$6.20	\$10,162				\$10,162	
48	Turn		Bike Lane, Both Sides	2179	\$6.20	\$13,510				\$13,510	
49	Madrone Parkway: Light Post Way to Cochrane Rd.		Bike Lane, Both Sides	1517	\$6.20	\$9,405				\$9,405	
50	Cochrane Road: Mission View to Peet Rd		Bike Lane, One Side	1237	\$3.60	\$4,453				\$4,453	
51	Eagle View: Peet Rd. to Morning Star		Bike Route	2310	\$1.00	\$2,310				\$2,310	
52	E. Main Ave.: Butterfield Rd. to West Side of Hwy.		Bike Lane, Both Sides	4098	\$6.20	\$25,408				\$25,408	2, 6
53	E. Main Ave.: Western end of HS to Elm Rd.		Bike Lane, Both Sides	1703	\$6.20	\$10,559				\$10,559	2, 6
54	E. Main Ave.: Elm Rd. to Hill Rd.		Bike Route	831	\$1.00	\$831				\$831	
55	E. Main Ave.: Hill Rd. to Coyote Rd.		Bike Route w/Shoulder Striping	1748	\$4.00	\$6,992				\$6,992	
140	Madrone Channel Trail		Shared-Use Path	4645	\$103.00	\$478,435				\$478,435	
141	Madrone Channel Trail		Shared-Use Path	5521	\$103.00	\$568,663				\$568,663	
<b>Sector 2 Total:</b>						<b>\$2,292,759</b>	<b>\$300,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,592,759</b>	



Morgan Hill Bikeways Master Plan Update - Cost Data  
Sector 3

Bikeways Segment #	Description	Segments with Installation Priority	Trail Type	Lineal Feet	Unit Cost	Subtotal	Bridge Crossing	Track Crossing	Median Refuge	Total	Applicable Foot Notes
56	Not Used										
57	Not Used										
58	Not Used										
59	Not Used										
60	Not Used										
61	Not Used										
62	Not Used										
64	Hill Rd.: Diana Ave. to E. Dunne Ave.		Bike Lane, Both Sides	3904	\$6.20	\$24,205				\$24,205	
65	Hill Dr.: E. Main Ave. to Diana Ave.		Bike Lane, Both Sides	1989	\$6.20	\$12,332				\$12,332	
66	Diana Ave. Hill Rd. to Madrone Channel		Bike Route w/Shoulder Striping	4948	\$4.00	\$19,792				\$19,792	
67	Future Road: E. Main Ave. to Diana Ave.		Bike Lane, Both Sides	1951	\$6.20	\$12,096				\$12,096	1
68	Condit Rd.: E. Main Ave. to Diana Ave.		Bike Lane, Both Sides	2027	\$6.20	\$12,567				\$12,567	
69	Murphy Ave.: Diana Ave. to E. Dunne Ave.		Bike Lane, Both Sides	2562	\$6.20	\$15,884				\$15,884	
70	Condit Rd.: Diana Ave. to E. Dunne Ave.		Bike Lane, Both Sides	2267	\$6.20	\$14,055				\$14,055	
71	Future Road: Walnut Grove Section south of Diana Ave. to Walnut Grove Section north of E. Dunne Ave.		Bike Lane, Both Sides	932	\$6.20	\$5,778				\$5,778	1
72A	Walnut Grove Dr.: Diana Ave to end of existing road section		Bike Lane, Both Sides	789	\$6.20	\$4,892				\$4,892	
72B	Walnut Grove Dr.: E. Dunne Ave to end of existing road section			851	\$6.20	\$5,276				\$5,276	
73	Diana Ave.: Rosemary Circle to Proposed bridge		Bike Lane, Both Sides	1975	\$6.20	\$12,245	\$2,000,000			\$2,012,245	
74	Rosemary Circle: Diana Ave. to E. Dunne Ave.		Bike Lane, Both Sides	1648	\$6.20	\$10,218				\$10,218	
75	Diana Ave.: Butterfield Rd. to Rosemary Circle		Bike Lane, Both Sides	1893	\$6.20	\$11,737				\$11,737	
76	Not Used									\$0	
77	Calle Mazatlan: E. Main Ave. to Diana Ave.		Bike Route	1985	\$1.00	\$1,985				\$1,985	
78	Serene Dr.: E. Main Ave. to Diana Ave.		Bike Route	2132	\$1.00	\$2,132				\$2,132	
142	Madrone Channel Trail: E. Main Ave. to E. Dunne Ave.		Shared Use Path	4249	\$103.00	\$437,647				\$437,647	
				<b>Sector 3 Total:</b>		<b>\$602,842</b>	<b>\$2,000,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,602,842</b>	

Morgan Hill Bikeways Master Plan Update - Cost Data  
Sector 4

Bikeways Segment #	Description	Segments with Installation	Trail Type	Lineal Feet	Unit Cost	Subtotal	Bridge Crossing	Track Crossing	Median Refuge	Total	Applicable Foot Notes
79	Cielino.: Monterey Rd. to Del Monte St.		Bike Route	865	\$1.00	\$865				\$865	
82	Dewitt Ave.: W. Dunne Ave. to W. Edmondson Ave.		Bike Lane, Both Sides	6093	\$6.20	\$37,777				\$37,777	
83	W. Edmondson Ave.: Oak Glen Ave. to Dewitt Ave.		Bike Route	3815	\$1.00	\$3,815				\$3,815	
83A	W. Edmondson Ave: Dewitt Ave to Sunnyside Ave.		Bike Route	1312	\$1.00	\$1,312				\$1,312	
84	Sunnyside Ave.: Via DelCastille to W. Edmondson Ave.		Bike Lane, Both Sides	3457	\$6.20	\$21,433			\$50,000	\$71,433	2
84A	Sunnyside Ave.: Via DelCastille to Watsonville Rd		Bike Lane, One Side	1425	\$3.60	\$5,130				\$5,130	2
85	Encino Roble Dr.: La Alameda to Sunnyside Ave.		Bike Route	1922	\$1.00	\$1,922				\$1,922	
86	La Alameda: La Crosse Circle to Watsonville Rd.		Bike Route	2245	\$1.00	\$2,245				\$2,245	
86A	Sierra Ct: La Crosse Circle to end of cul-de-sac		Bike Route	458	\$1.00	\$458				\$458	
87	Calle Enrique: La Crosse Circle to Watsonville Rd.		Bike Route	1750	\$1.00	\$1,750				\$1,750	
88	Little Llagas Creek Trail (West Side): La Crosse Circle to Watsonville Rd.		Shared-Use Path	2030	\$103.00	\$209,090	\$300,000		\$50,000	\$559,090	3
88A	Little Llagas Creek Trail (East Side): La Crosse Circle to Watsonville Rd.		Shared-Use Path	1821	\$103.00	\$187,563				\$187,563	3
89	Vineyard Blvd.: Monterey Rd. to La Crosse Circle		Bike Lane, Both Sides	1013	\$6.20	\$6,281				\$6,281	
90	Little Llagas Creek Trail: Edes Ct to Cosmo		Shared-Use Path	1154	\$103.00	\$118,862				\$118,862	7
91	Little Llagas Creek Trail: Cosmo to Spring Ave		Shared-Use Path	1315	\$103.00	\$135,445			\$50,000	\$185,445	7
91A	Little Llagas Creek Trail: Spring Ave to W. Dunne Ave.		Shared-Use Path	1240	\$103.00	\$127,720			\$50,000	\$177,720	7
92	Del Monte Street: W. Dunne Ave. to Cosmo		Bike Route	2720	\$1.00	\$2,720				\$2,720	
93	Hale Ave.: W. Dunne to Dewitt Ave.		Bike Lane, Both Sides	2498	\$6.20	\$15,488				\$15,488	
93A	Spring Ave: Monterey Rd to Dewitt Ave.		Bike Lane, Both Sides	4277	\$6.20	\$26,517				\$26,517	
94	Denali Dr/Olympic Dr.: Cosmo to W. Edmondson Ave.		Bike Lane, Both Sides	2235	\$6.20	\$13,857				\$13,857	
94A	Cosmo: Denali Dr. to Monterey Rd.		Bike Route	1471	\$1.00	\$1,471				\$1,471	
95	W. Edmondson Ave.: Sunnyside Ave. to Community Park		Bike Lane, Both Sides	3973	\$6.20	\$24,633				\$24,633	
96	Future Road: Dewitt Ave. to W. Edmondson Ave.		Bike Lane, Both Sides	1317	\$6.20	\$8,165			\$50,000	\$58,165	1
97	Trail: W. Edmondson to La Crosse Circle		Shared-Use Path	2215	\$103.00	\$228,145				\$228,145	
98	La Crosse Circle: Vineyard Ave to Vineyard Ave		Bike Lane, Both Sides	7366	\$6.20	\$45,669			\$50,000	\$95,669	
114	Not Used					\$0				\$0	
115	Watsonville Rd: Bowden Ct to Sunnyside Ave		Bike Route w/Shoulder Striping	4386	\$4.00	\$17,544				\$17,544	
116	Watsonville Rd: Monterey Rd to Calle Sueno		Bike Lane, Both Sides	748	\$6.20	\$4,638				\$4,638	
117	Watsonville Rd: Calle Sueno to Sunnyside Ave		Bike Lane, One Side	4950	\$3.60	\$17,820				\$17,820	
Sector 4 Total:							\$300,000	\$0	\$300,000	\$1,868,334	

Morgan Hill Bikeways Master Plan Update - Cost Data  
Sector 5

Bikeways Segment #	Description	Segments with Installation Priority	Trail Type	Lineal Feet	Unit Cost	Subtotal	Bridge Crossing	Track Crossing	Median Refuge	Total	Applicable Foot Notes
63	E. Dunne Ave. Gallopp Dr. to Thomas Grade		Bike Route w/Shoulder Striping	6130	\$4.00	\$8,144				\$8,144	
99	Church St.: E. Dunne Ave. to Tennant Ave.		Bike Route	4936	\$1.00						
100	Butterfield Rd.: San Pedro Ave. to Tennant Ave.		Shared-Use Path	3756	\$103.00	\$327,334				\$327,334	
101	Juan Hernandez Dr.: E. Dunne Ave. to Tennant Ave.		Bike Lane, Both Sides	5260	\$6.20	\$19,580				\$19,580	
102	Condit Rd.: E. Dunne Ave. to Tennant Ave.		Bike Lane, Both Sides	5239	\$6.20	\$16,473				\$16,473	
103	Murphy Ave.: E. Dunne Ave. to Tennant Ave.		Bike Lane, Both Sides	4843	\$6.20	\$12,530				\$12,530	
104	Trail: Tennant Creek Trail to Jackson Elementary		Shared-Use Path	2523	\$103.00	\$195,185				\$195,185	
105	Gallop Dr./Trail Dr.: E. Dunne Ave. to Barrett Ave.		Bike Route	3526	\$1.00	\$1,390				\$1,390	
106	Barrett Ave.: Hill Rd. to Trail Dr.		Bike Route	2530	\$1.00	\$676				\$676	
107	Tennant Creek Trail: E. Dunne Ave. to Tennant Ave.		Shared-Use Path	5372	\$103.00	\$557,912			\$100,000	\$357,912	
108	Hill Rd.: E. Dunne Ave. to Barrett Ave.		Bike Route w/Shoulder Striping	3246	\$4.00	\$16,140				\$16,140	
108A	Hill Rd.: Barrett Ave. to Tennant Ave.		Bike Route w/Shoulder Striping	1591	\$4.00	\$5,448				\$5,448	
108B	Hill Rd.: Tennant Ave. to Maple Ave.		Bike Route w/Shoulder Striping	3581	\$4.00	\$16,140				\$16,140	
109	Tennant Creek Trail: Tennant Ave. to Maple Ave.		Shared-Use Path	4369	\$103.00	\$140,266			100,000	\$240,266	
110	Murphy Ave.: Tennant Ave. to Maple Ave.		Bike Lane, Both Sides	3420	\$6.20	\$8,103				\$8,103	
111	Future Butterfield Rd Branch.: Future Butterfield Rd. to Maple Ave.		Bike Lane, Both Sides	1763	\$6.20	\$25,749				\$25,749	1
112	Future Butterfield Rd.: Tennant Ave. to Watsonville Rd.		Bike Lane, Both Sides	3751	\$6.20	\$5,580				\$5,580	
113	Barrett Ave.: Murphy Ave. to Hill Rd.		Bike Lane, Both Sides	4133	\$6.20	\$11,172				\$11,172	
113A	Barrett Ave.: Butterfield Rd. to Murphy Ave.		Bike Lane, Both Sides	3613	\$6.20	\$7,558	\$2,000,000			\$2,007,558	
143	Madrone Channel Trail: E. Dunne Ave. to Tennant Ave.		Shared-Use Path	5319	\$103.00	\$130,398				\$130,398	
144	Madrone Channel Trail: Tennant Ave. to Maple Ave.		Shared-Use Path	3690	\$103.00	\$208,266				\$208,266	
<b>Sector 5 Total:</b>						<b>\$1,414,064</b>	<b>\$2,000,000</b>	<b>\$0</b>	<b>\$200,000</b>	<b>\$3,614,064</b>	

Morgan Hill Bikeways Master Plan Update - Cost Data  
Sector 6

Bikeways Segment #	Description	Segments with Installation Priority	Trail Type	Lineal Feet	Unit Cost	Subtotal	Bridge Crossing	Track Crossing	Median Refuge	Total	Applicable Foot Notes
118	Native Dancer: Santa Teresa Blvd. to Middle Ave.		Bike Route	2815	\$1.00	\$2,815				\$2,815	
119	Middle Ave. : Native Dancer to Santa Teresa Blvd.		Bike Route	1376	\$1.00	\$1,376				\$1,376	
120	West Little Llagas Creek Trail: Watsonville Rd. to Silveira Park Trail		Shared-Use Path	4726	\$103.00	\$486,778	\$300,000			\$786,778	7
121	Silveira Park Trail: Santa Teresa Blvd. To east of pond		Shared-Use Path	2736	\$103.00	\$281,808	\$300,000		\$50,000	\$631,808	
122	Monterey Rd: Middle Ave to California Ave.		Bike Lane, Both Sides	3820	\$6.20	\$23,684				\$23,684	
123	Monterey Rd.: California to Burbank St.		Bike Lane, Both Sides	2798	\$6.20	\$17,348				\$17,348	4, 6
124	Santa Teresa Blvd.: Water Ave. to Anne Marie Ct.		Bike Lane, Both Sides	2219	\$6.20	\$13,758				\$13,758	4, 6, 8
125	Water Ave.: Easy St. to Sant Teresa Blvd.		Bike Route	1474	\$1.00	\$1,474				\$1,474	
126	Santa Teresa Blvd.: Watsonville Rd. to Silveira Park Trail		Bike Route w/Shoulder Striping	2585	\$4.00	\$10,340				\$10,340	4, 6, 8
127	Easy St.: Sunshine St. to Atherton Way		Bike Route	2814	\$1.00	\$2,814				\$2,814	
128	Easy St.: Sunshine St. to Water Ave.		Bike Route	1839	\$1.00	\$1,839				\$1,839	
129	Santa Teresa Blvd.: Silveira Park Trail to Water Ave.		Bike Route w/Shoulder Striping	4232	\$4.00	\$16,928				\$16,928	4, 6, 8
<b>Sector 6 Total:</b>						<b>\$860,961</b>	<b>\$600,000</b>	<b>\$0</b>	<b>\$50,000</b>	<b>\$1,510,961</b>	

Morgan Hill Bikeways Master Plan Update - Cost Data  
Sector 7

Bikeways Segment #	Description	Segments with Installation Priority	Trail Type	Linear Feet	Unit Cost	Subtotal	Bridge Crossing	Track Crossing	Median Refuge	Total	Applicable Foot Notes
130	Future Butterfield Rd.: Maple Ave. to Middle Ave.		Bike Lane, Both Sides	3446	\$6.20	\$21,365				\$21,365	1
131	Middle Ave.: Monterey Rd. to Murphy Ave.		Bike Lane, Both Sides	4610	\$6.20	\$28,582				\$28,582	
132	Murphy Ave.: Maple Ave. to Middle Ave.		Bike Lane, Both Sides	3745	\$6.20	\$23,219				\$23,219	
133	Tennant Creek Trail: Maple Ave. to Middle Ave.		Shared-Use Path	4022	\$103.00	\$414,266				\$414,266	
134	Middle Ave.: Murphy Ave. to Foothill Ave.		Bike Route w/Shoulder Striping	5708	\$4.00	\$22,832				\$22,832	
135	Center Ave.: Hill Rd to Middle Ave.		Bike Route w/Shoulder Striping	3923	\$4.00	\$15,692				\$15,692	
136	Center Ave.: Middle Ave. to Berlin Dr.		Bike Route w/Shoulder Striping	5887	\$4.00	\$23,548				\$23,548	
137	Foothill Ave.: Middle Ave. to Harvey Bear exit		Bike Route w/Shoulder Striping	6253	\$4.00	\$25,012				\$25,012	
138	Sycamore Ave.: Middle Ave. to End of Trail		Bike Route w/Shoulder Striping	6512	\$4.00	\$26,048				\$26,048	
139	Not Used					\$0				\$0	
145	Madrone Channel Trail: Maple Ave. to Middle Ave.		Shared-Use Path	3450	\$103.00	\$355,350				\$355,350	
<b>Sector 7 Total:</b>							<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$955,914</b>	

Morgan Hill Bikeways Cost Summary

Sector	Subtotal	Bridge Crossing	Track Crossing	Median Refuge	Total
Sector 1	\$730,898	\$0	0	\$0	\$730,898
Sector 2	\$2,292,759	\$300,000	0	\$0	\$2,592,759
Sector 3	\$602,842	\$2,000,000	0	\$0	\$2,602,842
Sector 4	\$1,268,334	\$300,000	0	\$300,000	\$1,868,334
Sector 5	\$1,414,064	\$2,000,000	0	\$200,000	\$3,614,064
Sector 6	\$860,961	\$600,000	0	\$50,000	\$1,510,961
Sector 7	\$955,914	\$0	0	\$0	\$955,914
<b>Total Bikeways</b>	<b>\$8,125,773</b>	<b>\$5,200,000</b>	<b>\$0</b>	<b>\$550,000</b>	<b>\$13,875,773</b>

# Morgan Hill Bikeways Master Plan Update - Cost Data Foot Notes

## Footnotes

#	Comments
1	Future Road, see General Plan Circulation Map. Bike lanes on both sides of the road will be designed as part of the new roadway project. Bikeway costs should be incorporated into the overall roadway cost.
2	Road Improvement Project Planned for the Future, such as roadway extension, expansion, widening, overlay projects and intersection improvements: Costs for bikeways design and implementation will be born by improvement project.
3	Project has been funded and is currently in the design phase. Construction is expected to start in 2008/2009.
4	Bikeways improvements will be implemented concurrent with development projects.
5	Future Watsonville bridge widening project needed to allow for bike lanes on both side of the street. Box culvert needs to be widened. This will be a joint project with Santa Clara County. City has been trying to secure grant funding for the bridge widening.
6	No provisions made in the current 5 year Capital Improvement Program.
7	The West Little Llagas Creek is a Santa Clara Valley Water District Flood Control facility. Bike path projects along the creek have to be coordinated with the PL 566 regional storm drain project to be designed and constructed by the Corps of Engineers. Not all right-of-ways have been purchased by the Santa Clara Valley Water District. Trail design and implementation is pending fund availability and right-of-way acquisition by SCVWD.
8	Santa Teresa corridor improvements will not be completed any time soon largely due to the lack of an official plan line for its alignment. To get this project completed will require a great deal of development and/or significant CIP expenditures of the next decade.

## **Appendix 2: Morgan Hill Bicycle Projects in the VTA Bicycle Expenditure Program (BEP)**

## Report 3-3 Completed BEP Projects Status- April 1, 2007

Sponsor Campbell			
ID #	Project Title	2005 BEP Amount:	Total Project Cost:
30-B03	Camden Ave ped/bike bridge replacement and extend Los Gatos Creek	\$640,000	\$800,000
Sponsor Cupertino			
ID #	Project Title	2005 BEP Amount:	Total Project Cost:
20-B08	San Tomas Aquino /Saratoga Creek Trail -on road	\$150,000	\$500,000
ID #	Project Title	2005 BEP Amount:	Total Project Cost:
20-B17	De Anza Trail (UPRR ROW) Feasibility Study	\$160,000	\$200,000
Sponsor Gilroy			
ID #	Project Title	2005 BEP Amount:	Total Project Cost:
30-B12	Uvas Creek Class 1 Trail-bridge Trail along levee under bridge Luchess	\$523,000	\$11,899,752
Sponsor Los Altos			
ID #	Project Title	2005 BEP Amount:	Total Project Cost:
20-B?	Hetch-Hetchy ROW Bike Path	\$0	\$0
Sponsor Milpitas			
ID #	Project Title	2005 BEP Amount:	Total Project Cost:
30-B16	Berryessa Creek Trail Reach 3	\$375,000	\$900,000
ID #	Project Title	2005 BEP Amount:	Total Project Cost:
30-B17	Coyote Creek Trail, Reach 1	\$600,000	\$1,200,000
ID #	Project Title	2005 BEP Amount:	Total Project Cost:
30-B18	UPRR Bicycle/Pedestrian Overcrossing Feasibility Study	\$200,000	\$200,412
Sponsor Palo Alto			
ID #	Project Title	2005 BEP Amount:	Total Project Cost:
30-B27	Homer Avenue Undercrossing	\$1,000,000	\$5,607,000
Sponsor Santa Clara			
ID #	Project Title	2005 BEP Amount:	Total Project Cost:
30-B35	River Oaks Ped/Bike Bridge	\$1,840,000	\$2,829,000



## Report 3-2 BEP Projects In Progress Status by Phase

Sponsor		Campbell
ID #	30-B01	Project Title
		Campbell Ave Bridge Widening & Los Gatos Creek Trail Improvement
		2005 BEP Amount: \$1,200,000
		Total Project Cost: \$1,500,000

Phase. # 1 Phase Cost: \$240,000

Phase Name: Whole project

### Milestone Schedule for Phase

MSID	Milestone	Start	End
1	Feasibility Study	6/03	2004
2	Prelim Eng	Jul 06	Nov 06
3	CEQA/NEPA	Spr 07	Fall 07
5	Design	Spr 2006	fall 07
6	Construction	Fall 07	Spring 2007

Sponsor		County Roads&Airports
ID #	30-B05	Project Title
		Bike and Pedestrian Improvements on Almaden Expressway between Ir
		2005 BEP Amount: \$1,840,000
		Total Project Cost: \$2,300,000

Phase. # 1 Phase Cost: \$80,000

Phase Name: Phase 1

Prelim Design and Env

### Milestone Schedule for Phase

MSID	Milestone	Start	End
1	Feasibility Study		9/03
2	Prelim Eng	11/04	10/05
3	CEQA/NEPA	11/05	02/06
4	Permits	11/05	02/06
5	Design	11/05	03/06
6	Construction	June 2006	03/2007

ID #	30-B06	Project Title
		Bike Shoulder Delineation Improvements on Expressways
		2005 BEP Amount: \$500,000
		Total Project Cost: \$625,000

Phase. # 1 Phase Cost: \$0

Phase Name: First project

### Milestone Schedule for Phase

MSID	Milestone	Start	End
1	Feasibility Study	na	na
3	CEQA/NEPA	Aug 02	Sep 02
5	Design	may 03	Dec 05
6	Construction	3/31/06	12/31/2006

Sponsor		Cupertino
ID #	30-B11	Project Title
		Mary Avenue Bicycle/Pedestrian Overcrossing at I-280
		2005 BEP Amount: \$7,000,000
		Total Project Cost: \$8,750,000

Phase. # 1 Phase Cost: \$1,741,000

Phase Name: Phase 1

Bridge Structure

### Milestone Schedule for Phase

MSID	Milestone	Start	End
1	Feasibility Study		completed

Friday, April 20, 2007

Page 1 of 6

**Phase. # 5**      **Phase Cost:**    \$3,059,000  
**Phase Name:**    Phase 5  
mobilize, contingency

Milestone Schedule for Phase			
MSID	Milestone	Start	End
5	Design	Mar 03	Apr 06

**Phase. # 6**      **Phase Cost:**    \$1,200,000  
**Phase Name:**    Phase 6  
Design, Engineering

Milestone Schedule for Phase			
MSID	Milestone	Start	End
6	Construction	Jun 06	7/31/2007

Sponsor    Los Altos			
ID #	30-B14	Project Title	2005 BEP Amount:    Total Project Cost:
		Adobe Creek Bike/Pedestrian Bridge Replacement	\$388,000      \$500,000

**Phase. # 1**      **Phase Cost:**    \$0  
**Phase Name:**    whole project

Milestone Schedule for Phase			
MSID	Milestone	Start	End
3	CEQA/NEPA	11/30/05	Jun 06
5	Design	11/30/05	Jun 06
6	Construction	9/30/06	6/30/2007

Sponsor    Los Altos Hills			
ID #	30-B52	Project Title	2005 BEP Amount:    Total Project Cost:
		Moody/El Monte Road Bicycle Pedestrian Path Project	\$840,000      \$1,050,000

**Phase. # 1**      **Phase Cost:**    \$730,000  
**Phase Name:**    Segment 1  
Moody Rd BikePed accommodation from \_\_ to

Milestone Schedule for Phase			
MSID	Milestone	Start	End
1	Feasibility Study	Mar 05	Apr 05
3	CEQA/NEPA	Mar 06	May 06
5	Design	Mar 06	Jun 06
6	Construction	Jun 06	May 07

**Phase. # 2**      **Phase Cost:**    \$759,500  
**Phase Name:**    Segment 2  
Foothill College Bike/Ped Path from Elena to Fo

Milestone Schedule for Phase			
MSID	Milestone	Start	End
3	CEQA/NEPA	Mar 06	May 06
5	Design	May 06	Aug 06
6	Construction	Mar 07	Jul 07

**Phase. # 3**      **Phase Cost:**    \$1,000,000  
**Phase Name:**    Segment 3  
El Monte Rd Foothill College Entrance to Stone

Milestone Schedule for Phase			
MSID	Milestone	Start	End
1	Feasibility Study	Aug 05	Mar 06
2	Prelim Eng	Aug 05	Mar 06
3	CEQA/NEPA	Jun 07	Sep 07
4	Permits	Nov 07	Jan 08

5	Design	Jun 07	Dec 07
6	Construction	Mar 08	Aug 08

Sponsor <b>Los Gatos/Monte Sereno</b>			
ID #	30-B19	Project Title	2005 BEP Amount: Total Project Cost:
		Highway 9 Bicycle / Pedestrian Safety Improvements	\$1,400,000 \$1,700,000

**Phase. # 1**      **Phase Cost:**      \$15,000

**Phase Name:**      Phase 1-  
Feasibility Study

#### Milestone Schedule for Phase

MSID	Milestone	Start	End
1	Feasibility Study	April 2004	2004

**Phase. # 2**      **Phase Cost:**      \$1,700,000

**Phase Name:**      Phase 2  
Env., Design & Construction

#### Milestone Schedule for Phase

MSID	Milestone	Start	End
3	CEQA/NEPA	Dec 2006	May 2006
5	Design	Dec 2006	Mar 2007
6	Construction	fall 2007	3/1/2008

Sponsor <b>Morgan Hill</b>			
ID #	30-B21	Project Title	2005 BEP Amount: Total Project Cost:
		West Little Llagas Creek Bicycle /Pedestrian Pathway	\$1,200,560 \$1,500,000

**Phase. # 1**      **Phase Cost:**      \$400,000

**Phase Name:**      Phase 1  
Design / construction of: an 8-foot wide bike pat

#### Milestone Schedule for Phase

MSID	Milestone	Start	End
1	Feasibility Study	July 2001	Apr 03
3	CEQA/NEPA	Mar 04	Dec 05
4	Permits	06/06	08/2006
5	Design	01/06	03/06
6	Construction	06/06	08/2006

**Phase. # 2**      **Phase Cost:**      \$689,550

**Phase Name:**      Phase 2  
Design / construction of: an 8-foot wide bike pat

#### Milestone Schedule for Phase

MSID	Milestone	Start	End
3	CEQA/NEPA	11/29/05	
4	Permits	05/ 20/06	Aug 2006
5	Design	4/20/06	6/20/06
6	Construction	Oct 2006	Dec 2006

Sponsor <b>Mountain View</b>			
ID #	30-B24	Project Title	2005 BEP Amount: Total Project Cost:
		Stevens Creek Trail, Reach 4 North	\$1,200,000 \$3,800,000

**Phase. # 1**      **Phase Cost:**      \$500,000

**Phase Name:**      Phase 1  
Design

#### Milestone Schedule for Phase

MSID	Milestone	Start	End
1	Feasibility Study		Jun 01
2	Prelim Eng		

Friday, April 20, 2007

Page 3 of 6

3	CEQA/NEPA		Jun 04
5	Design	Oct 04	Jan 06
6	Construction	7/06	12/31/2007

Sponsor Palo Alto			
ID #	30-B25	Project Title	2005 BEP Amount: Total Project Cost:
		Bicycle Boulevard/Lanes Network	\$4,000,000 \$5,000,000

Phase. # 1 Phase Cost: \$100,000

Phase Name: Phase 1

Read tda application

#### Milestone Schedule for Phase

MSID	Milestone	Start	End
5	Design	Feb 06	May 06
6	Construction	jul	aug 06

Sponsor San Jose			
ID #	30-B32	Project Title	2005 BEP Amount: Total Project Cost:
		Los Gatos Creek Trail (Reach 4: Lincoln to Auzerais)	\$3,600,000 \$4,800,000

Phase. # 1 Phase Cost: \$0

Phase Name: whole project

#### Milestone Schedule for Phase

MSID	Milestone	Start	End
1	Feasibility Study	Aug 02	Oct 04
3	CEQA/NEPA	Oct 03	Oct 04
5	Design	Nov 04	Nov 05
6	Construction	June 06	11/30/2007

ID #	30-B33	Project Title	2005 BEP Amount: Total Project Cost:
		Los Gatos Creek Trail (Reach 5: Santa Clara to Auzerais)	\$5,120,000 \$6,826,667

Phase. # 1 Phase Cost: \$0

Phase Name: whole project

#### Milestone Schedule for Phase

MSID	Milestone	Start	End
1	Feasibility Study	5/1/2005	Sep 06
2	Prelim Eng	Apr 05	Sep 06
3	CEQA/NEPA	Oct 06	may 06
4	Permits	Feb 09	Feb 10
5	Design	Feb 08	Feb 10
6	Construction	Mar 10	Dec 2011
7	Dedication/Gran		Jan 2011

Sponsor Santa Clara			
ID #	30-B36	Project Title	2005 BEP Amount: Total Project Cost:
		San Tomas Aquino / Saratoga Creek Trail Reaches 1,2, 3 and4 (Hwy 23	\$5,000,000 \$19,741,000

Phase. # 1 Phase Cost: \$5,500,000

Phase Name: Reach 1

Hwy 237 to Agnew Bike path. Completed.

#### Milestone Schedule for Phase

MSID	Milestone	Start	End
6	Construction	jun 2004	Mar 2005
7	Dedication/Gran		April 2005

Friday, April 20, 2007

Page 4 of 6

**Phase. # 2**      **Phase Cost:**      \$4,400,000

**Phase Name:**      Reach 2

Agnew to 101 and 101 to Scott. Reach 2 to be

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**Milestone Schedule for Phase**

MSID	Milestone	Start	End
6	Construction	Jun 2005	Mar 2006
7	Dedication/Gran		April 2006

**Phase. # 3**      **Phase Cost:**      \$8,250,000

**Phase Name:**      Reach 3

Scott to Monroe, POC at Cent Exp, Walsh, SPR

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**Milestone Schedule for Phase**

MSID	Milestone	Start	End
3	CEQA/NEPA	3-underway NE	Dec 05
5	Design	2004	2006
6	Construction	June 06	Mar 2007

**Phase. # 4**      **Phase Cost:**      \$1,650,000

**Phase Name:**      Reach 4

Monroe to city limits at ???: combination of trail,

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**Milestone Schedule for Phase**

MSID	Milestone	Start	End
1	Feasibility Study		
5	Design	2004	2006
6	Construction	Jun 06	Mar 07

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**Sponsor      Saratoga**

ID #	30-B38	Project Title	2005 BEP Amount:	Total Project Cost:
		Cox Ave Railroad Project - improve grade crossings and bicycle paths	\$469,641	\$500,000

**Phase. # 1**      **Phase Cost:**      \$0

**Phase Name:**      Whole project

Construction

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**Milestone Schedule for Phase**

MSID	Milestone	Start	End
1	Feasibility Study	completed	completed
3	CEQA/NEPA	ip	
6	Construction	May 06	8/30/2006

ID #	30-B39	Project Title	2005 BEP Amount:	Total Project Cost:
		De Anza Trail (PGE/UPRR) Reach 3	\$1,997,577	\$2,497,000

**Phase. # 1**      **Phase Cost:**      \$200,000

**Phase Name:**      Phase 1

Feasibility study

---

**Milestone Schedule for Phase**

MSID	Milestone	Start	End
1	Feasibility Study	9/1/2000	
3	CEQA/NEPA	2003	Sep 05
4	Permits		
5	Design	04	Jun 06
6	Construction	Sep 2007	9/1/2008

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**Sponsor      Sunnyvale**

ID #	30-B42	Project Title	2005 BEP Amount:	Total Project Cost:
		Borregas Ave Bike/Ped Overcrossings at US 101& SR 237	\$5,040,000	\$8,400,000

**Phase. # 1**      **Phase Cost:**    \$132,000

**Phase Name:**    Phase 1

Feasibility Study

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**Milestone Schedule for Phase**

<b>MSID</b>	<b>Milestone</b>	<b>Start</b>	<b>End</b>
1	Feasibility Study		Sep 98
2	Prelim Eng		Sep 98
3	CEQA/NEPA	May 02	April 06
4	Permits		
5	Design	Dec 04	Jun 06
6	Construction	Jul 2006	7/1/2009

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<b>ID #</b>	30-B45	<b>Project Title</b>
		Sunnyvale Train Station Northside Access

<b>2005 BEP Amount:</b>	<b>Total Project Cost:</b>
\$1,400,000	\$1,800,000

**Phase. # 1**      **Phase Cost:**    \$0

**Phase Name:**    Whole project

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**Milestone Schedule for Phase**

<b>MSID</b>	<b>Milestone</b>	<b>Start</b>	<b>End</b>
1	Feasibility Study	2005	2007
6	Construction		12/31/2012

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**Sponsor**    **VTA**

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<b>ID #</b>	30-B46	<b>Project Title</b>
		Pilot Bicycle Parking Program

<b>2005 BEP Amount:</b>	<b>Total Project Cost:</b>
\$100,000	\$200,000

**Phase. # 1**      **Phase Cost:**    \$0

**Phase Name:**    Whole project

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**Milestone Schedule for Phase**

<b>MSID</b>	<b>Milestone</b>	<b>Start</b>	<b>End</b>
3	CEQA/NEPA		na
5	Design		12/05
6	Construction	12/01/05	10/1/2006

## Report 3-1 BEP Projects Not Started - Status by Phase

Sponsor Morgan Hill				
ID #	30-B20	Project Title	2005 BEP Amount:	Total Project Cost:
		Coyote Creek Trail Connection	\$410,000	\$500,000
Phase. # 1	Phase Cost:	\$0	Milestone Schedule for Phase	
Phase Name:	Whole project		MSID	Milestone Start End
			1	Feasibility Stud
			3	CEQA/NEPA
			5	Design 12/31/05
			6	Construction 12/31/2012
Sponsor Mountain View				
ID #	30-B22	Project Title	2005 BEP Amount:	Total Project Cost:
		Stevens Creek Trail Reach 4 central	\$3,200,000	\$4,000,000
Phase. # 1	Phase Cost:	\$0	Milestone Schedule for Phase	
Phase Name:	Whole project		MSID	Milestone Start End
			1	Feasibility Stud
			3	CEQA/NEPA june 04
			4	Permits
			6	Construction 05/06 12/31/2012
ID #	30-B23	Project Title	2005 BEP Amount:	Total Project Cost:
		Stevens Creek Trail Reach 4 South	\$4,000,000	\$5,000,000
Phase. # 1	Phase Cost:	\$0	Milestone Schedule for Phase	
Phase Name:	Whole project		MSID	Milestone Start End
			1	Feasibility Stud
			3	CEQA/NEPA
			5	Design
			6	Construction 12/31/2012
Sponsor Palo Alto				
ID #	30-B26	Project Title	2005 BEP Amount:	Total Project Cost:
		California Avenue Caltrain Undercrossing	\$4,000,000	\$9,000,000
Phase. # 1	Phase Cost:	\$0	Milestone Schedule for Phase	
Phase Name:	Whole project		MSID	Milestone Start End
			1	Feasibility Stud
			3	CEQA/NEPA
			5	Design
			6	Construction 12/31/2012

Friday, April 20, 2007

Page 1 of 3

<b>Sponsor San Jose</b>			
<b>ID #</b>	30-B28	<b>Project Title</b>	<b>2005 BEP Amount: Total Project Cost:</b>
		Almaden Expressway Bike /Ped Overcrossing Near Coleman Road	\$4,600,000 \$5,700,000
<b>Phase. # 1</b>	<b>Phase Cost:</b>	<b>Milestone Schedule for Phase</b>	
	\$0		
<b>Phase Name:</b>	Whole project	<b>MSID</b>	<b>Milestone Start End</b>
		5	Design 2004/05 7/31/05
		6	Construction 9/30/05 9/30/2006
<b>ID #</b>	30-B29	<b>Project Title</b>	<b>2005 BEP Amount: Total Project Cost:</b>
		Branham Lane - Highway 101 Bike Ped Overcrossing	\$4,000,000 \$5,000,000
<b>Phase. # 1</b>	<b>Phase Cost:</b>	<b>Milestone Schedule for Phase</b>	
	\$0		
<b>Phase Name:</b>	Whole project	<b>MSID</b>	<b>Milestone Start End</b>
		1	Feasibility Stud Apr 04
		3	CEQA/NEPA
		5	Design
		6	Construction 12/31/2012
<b>ID #</b>	30-B30	<b>Project Title</b>	<b>2005 BEP Amount: Total Project Cost:</b>
		Coyote Creek Trail (from Hwy237/Bay Trail to Story/Keyes)	\$4,880,000 \$6,100,000
<b>Phase. # 1</b>	<b>Phase Cost:</b>	<b>Milestone Schedule for Phase</b>	
	\$0		
<b>Phase Name:</b>	Whole project	<b>MSID</b>	<b>Milestone Start End</b>
		1	Feasibility Stud
		3	CEQA/NEPA
		6	Construction 12/31/2012
<b>ID #</b>	30-B31	<b>Project Title</b>	<b>2005 BEP Amount: Total Project Cost:</b>
		Guadalupe River Trail ( Alviso to Hwy 880)	\$4,080,000 \$5,100,000
<b>Phase. # 1</b>	<b>Phase Cost:</b>	<b>Milestone Schedule for Phase</b>	
	\$0		
<b>Phase Name:</b>	Whole project	<b>MSID</b>	<b>Milestone Start End</b>
		1	Feasibility Stud
		3	CEQA/NEPA
		6	Construction 12/31/2012
<b>Sponsor Santa Clara</b>			
<b>ID #</b>	30-B37	<b>Project Title</b>	<b>2005 BEP Amount: Total Project Cost:</b>
		Santa Clara Intermodal Station Bike Pedestrian Crossing	\$4,000,000 \$5,000,000
<b>Phase. # 1</b>	<b>Phase Cost:</b>	<b>Milestone Schedule for Phase</b>	
	\$0		
<b>Phase Name:</b>	whole project	<b>MSID</b>	<b>Milestone Start End</b>
		1	Feasibility Stud 2005/06
		2	Prelim Eng



3 CEQA/NEPA      april 06      2007  
6 Construction

Sponsor Sunnyvale				
ID #	30-B40	Project Title	2005 BEP Amount:	Total Project Cost:
		Bernardo Ave Undercrossing at Caltrain tracks	\$5,184,000	\$6,500,000
Phase. # 1	Phase Cost:	\$0		
Phase Name:	Whole project		Milestone Schedule for Phase	
	MSID	Milestone	Start	End
	1	Feasibility Stud		completed
	3	CEQA/NEPA	Jul 04	Jul 05
	5	Design	est Jan 07	Aug 08
	6	Construction	Sep 09	9/30/2013
ID #	30-B41	Project Title	2005 BEP Amount:	Total Project Cost:
		Borregas Avenue Bike Lanes (Weddell to Caribbean)	\$123,000	\$200,000
Phase. # 1	Phase Cost:	\$0		
Phase Name:	Whole project		Milestone Schedule for Phase	
	MSID	Milestone	Start	End
	3	CEQA/NEPA	02	06
	5	Design	Dec 04	Jun 06
	6	Construction	Jul 06	7/31/2009
ID #	30-B43	Project Title	2005 BEP Amount:	Total Project Cost:
		Evelyn Avenue Bike Lanes	\$287,000	\$400,000
Phase. # 1	Phase Cost:	\$0		
Phase Name:	Whole project		Milestone Schedule for Phase	
	MSID	Milestone	Start	End
	1	Feasibility Stud		
	3	CEQA/NEPA		
	5	Design		
	6	Construction		12/31/2012
ID #	30-B44	Project Title	2005 BEP Amount:	Total Project Cost:
		Sunnyvale East Drainage Trail - (JWC Greenway to Tasman)	\$400,000	\$500,000
Phase. # 1	Phase Cost:	\$0		
Phase Name:	Whole project		Milestone Schedule for Phase	
	MSID	Milestone	Start	End
	6	Construction		12/31/2012



## Bicycle Program

The project list below shows all of the projects that have been submitted by VTA's Member Agencies (the cities, towns and County of Santa Clara). These projects will undergo a process, both at the local (VTA) and regional (MTC) levels, to identify which projects can fit into the constrained section of VTP 2035 and which will be in the unconstrained section. At this point in the process, no funding allocations for the program areas have been developed. The projects are numbered alphabetically by facility. Check back for updates as the process proceeds over the next several months.

No.	Jurisdiction	Project Title	Cost (\$M)
1	Campbell	Campbell Ave improvements at SR 17 and Los Gatos Creek	\$1.50
2	Campbell	Los Gatos Creek Trail expansion on west side	\$2.50
3	Campbell	Widen Los Gatos Creek Trail on east side	\$0.30
4	Campbell	San Tomas Aquino Creek Trail	\$1.50
5	Cupertino	Bollinger Road bicycle facility improvement	\$0.40
6	Cupertino	Mary Ave bicycle/pedestrian overcrossing over I-280	\$7.10
7	Gilroy	Uvas Creek Trail study	\$0.20
8	Gilroy	Gilroy Sports Park	\$4.80
9	Gilroy	Northern Uvas Creek SCWVD service road west	\$1.90
10	Gilroy	Lions Creek SCWVD service road west (west of Wren Ave to Kern Ave)	\$0.90
11	Gilroy	Lions Creek SCWVD service road west (Kern Ave to Day Road)	\$1.90
12	Gilroy	Lions Creek SCWVD service road west (west of Santa Teresa Blvd)	\$0.60
13	Gilroy	SCWVD service road along western Llagas Creek	\$1.70
14	Gilroy	Western Ronan Channel SCWVD from Leavesley Road to Llagas Creek	\$2.70
15	Los Altos	Stevens Creek Link Trail	\$3.00
16	Los Altos	Adobe Creek Bicycle/Pedestrian bridge replacement	\$0.50
17	Los Altos	Stevens Creek Trail feasibility study	\$0.10
18	Los Gatos	SR 9 - Los Gatos Creek Trail connector	\$2.00

19	Los Gatos	Blossom Hill Road sidewalks and bicycle lanes	\$0.70
20	Milpitas	Berryessa Creek Trail	\$0.90
21	Milpitas	Montague Expwy pedestrian overcrossing	\$15.00
22	Monte Sereno	SR 9 bicycle lanes from Saratoga Ave to Los Gatos Blvd	\$1.70
23	Morgan Hill	Install Class I bicycle path adjacent to West Little Llagas Creek from Spring Ave to Watsonville Road	\$1.50
24	Morgan Hill	Madrone Recharge Channel - conversion to joint use bicycle and pedestrian pathway	\$0.50
25	Morgan Hill	Bicycle/pedestrian improvements on south side of Cochrane Road between DePaul Drive and MADrone Pkwy	\$0.60
26	Mountain View	Stevens Creek Trail Reach 4 - Segment 2 (Sleeper Ave to Dale/Heatherstone)	\$10.00
27	Mountain View	Stevens Creek Trail Reach 4 - Segment 2 (Dale/Heatherstone to Mountain View High School)	\$12.00
28	Mountain View	Permanente Creek Trail bicycle/pedestrian crossing of US 101 and Old Middlefield Way	\$7.50
29	Mountain View	Permanente Creek Trail undercrossing and extension	\$4.20
30	Mountain View	Hetch-Hetchy Trail - Middlefield Road and Shoreline Blvd	\$0.80
31	Mountain View	Stevens Creek Trail/Middlefield Road north side access	\$0.70
32	Mountain View	Stevens Creek Trail/Landels School access point improvements	\$0.60
33	Palo Alto	US 101 bicycle/pedestrian grade separation	\$13.00
34	Palo Alto	South Palo Alto Caltrain bicycle/pedestrian grade separation	\$13.00
35	Palo Alto	Replacement of California Ave Bicycle/pedestrian undercrossing of Caltrain tracks	\$13.00
36	Palo Alto	Bicycle boulevards network project	\$0.80
37	San Jose	Almaden Expwy bicycle/pedestrian overcrossing at Guadalupe Creek Trail	\$5.70
38	San Jose	Branham Lane/US 101 bicycle/pedestrian overcrossing "Edenvale Connector"	\$5.00
39	San Jose	Coyote Creek Trail - Montague to Kelley Park	\$20.00
40	San Jose	Guadalupe River Trail - Montague to Alviso	\$5.00

41	San Jose	Los Gatos Creek Trail - Auzerais to Santa Clara Street "Diridon Station Segment"	\$15.00
42	San Jose	Blossom Hill Road bicycle/pedestrian improvements	\$10.00
43	San Jose	Willow Glen Spur Trail	\$10.00
44	San Jose	Thompson Creek Trail from Yerba Buena to Eastridge Transit Center	\$15.00
45	San Jose	Five Wounds Trail - Watson Park to Williams Street Park "Alum Rock BART Station Segment"	\$17.50
46	San Jose	Penetencia Creek Trail - Coyote Creek to King Road "Berryessa BART Station Segment"	\$5.00
47	San Jose	Newhall Street bicycle/pedestrian overcrossing over Caltrain Corridor	\$7.00
48	Santa Clara	San Tomas Aquino Creek Trail Spur Trail	\$2.50
49	Santa Clara	San Tomas Aquino Creek Trail (SR 237 to City Limits)	\$17.00
50	Santa Clara	Santa Clara Intermodal Transit Center	\$5.00
51	Saratoga	PGE De Anza Trail (Reach 3)	\$2.50
52	Saratoga	Bicycle/pedestrian rail crossing between Fredericksburg Drive and Guava Court	\$0.25
53	Sunnyvale	Bernardo Caltrain undercrossing	\$8.46
54	Sunnyvale	Sunnyvale East Drainage Trail (JWCG - Tasman)	\$1.33
55	Sunnyvale	Sunnyvale Train Station NS grade separated access	\$8.50
56	Sunnyvale	Moffett Park bicycle/pedestrian trails	\$5.86
57	Sunnyvale	Stevens Creek Trail connector	\$1.38
58	Sunnyvale	Bicycle capital improvement program	\$3.13
59	Sunnyvale	Pedestrian safety and opportunities plan implementation	\$9.06
60	Sunnyvale	Projects identified in the pedestrian opportunity districts	\$2.56
61	Santa Clara County	Bicycle improvements at the Page Mill/I-280 interchange	\$6.60
62	Santa Clara County	McKean Road shoulder improvements (Harry Road to Bailey Ave)	\$6.60
63	Santa Clara County	Foothill-Loyola Bridge	\$7.00
64	Santa Clara County	Foothill/Magdalena shoulder widening	\$0.40
65	Santa Clara County Parks	Los Gatos Creek Trail (Vasona County Park)	\$1.54

66	Santa Clara County Parks	Coyote Creek Trail - Silicon Valley Blvd to Metcalf Road	\$1.08
67	Santa Clara County Parks	Coyote Creek Trail - Metcalf Road to Malaguera road	\$2.82
68	Valley Transportation Authority	Pilot bicycle parking program	\$0.20

**Total Cost \$339.06**

Other Program Areas

[Transit](#) | [ITS](#) | [Highways](#) | [Expressways](#) | [Local Streets](#) | [Bicycles](#) | [CDT](#) | [Soundwalls](#) | [Pavement](#) | [Graffiti & Landscaping](#)

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## Appendix 3: Bicycle Transportation Plan: Required Elements

- |    |  |                                   |
|----|--|-----------------------------------|
| A. | The estimated number of existing bicycle commuters in the plan area and the estimated increase in the number of bicycle commuters resulting from implementation of the plan.   | <i>Page 12</i>                    |
| B. | A map and description of existing and proposed land use and settlement patterns which shall include, but not be limited to, locations of residential neighborhoods, schools, shopping centers, public buildings and major employment centers.  | <i>Page 6</i>                     |
| C. | A map and description of existing and proposed bikeway.  | <i>Pages 19-27</i>                |
| D. | A map and description of existing and proposed end of trip bicycle parking facilities. These shall include, but not be limited to, parking at schools, shopping centers, public buildings, and major employment centers.   | <i>Chapter 3</i>                  |
| E. | A map and description of existing and proposed bicycle transport and parking facilities for connections with and use of other transportation modes. These shall include, but not be limited to, parking facilities at transit stops, rail and transit terminals, ferry docks and landings, park-and-ride lots, and provisions for transporting bicyclists and bicycles on transit or rail vehicles or ferry vessels. | <i>Chapter 3</i>                  |
| F. | A map and description of existing and proposed facilities for changing and storing clothes and equipment. These shall include, but not be limited to, locker, restroom, and shower facilities near bicycle parking facilities.   | <i>Chapter 3</i>                  |
| G. | A description of bicycle safety and education programs conducted in the area included within the plan, efforts by the law enforcement agency having primary traffic law enforcement responsibility in the area to enforce provisions of the Vehicle Code pertaining to bicycle operation, and the resulting effect on accidents involving bicyclist.   | <i>Chapter 5</i>                  |
| H. | A description of the extent of citizen and community involvement in development of the plan, including, but not limited to, letters of support.  | <i>Page 4</i>                     |
| I. | A description of how the bicycle transportation plan has been coordinated and is consistent with other local or regional transportation, air quality, or energy conservation plans, including, but not limited to, programs that provide incentives for bicycle commuting.   | <i>Page 3, 12</i>                 |
| J. | A description of the projects proposed in the plan and a listing of their priorities for implementation.   | <i>Chapter 2</i>                  |
| K. | A description of past expenditures for bicycle facilities and future financial needs for projects that improve safety and convenience for bicycle commuters in the plan area.  | <i>Pages 2, 41-42, Appendix 1</i> |